Planning Technical Advisory Committee Meeting (PTAC)

REGULAR MEETING AGENDA

September 19, 2007
10:00 a.m.

South Florida Regional Transportation Authority
Board Room
800 NW 33rd Street, Suite 100
Pompano Beach, Florida 33064
www.sfrta.fl.gov

FOR FURTHER INFORMATION CALL JOSEPH QUINTY AT (954) 788-7928

Members

Michael Busha, Treasure Coast Regional Planning Council
William Cross, South Florida Regional Transportation Authority
Carolyn Dekle, South Florida Regional Planning Council
Roger Del Rio, Broward Metropolitan Planning Organization
Lynn Everett-Lee, Broward County Transit
Jose Luis Mesa, Miami-Dade Metropolitan Planning Organization
Gustavo Schmidt, Florida Department of Transportation, District IV
John Spillman, Miami-Dade Transit
Phil Steinmiller, Florida Department of Transportation, District VI
Fred Stubbs, Palm Tran
Randy Whitfield, Chairman, Palm Beach Metropolitan Planning Organization
Nancy Ziegler, FDOT, District IV

Directions to SFRTA: I-95 to Copans Road. Go west on Copans to North Andrews Avenue Ext. and turn right. Go straight to Center Port Circle, which is NW 33rd Street, and turn right. SFRTA's offices are in the building to the right. The SFRTA offices are also accessible by taking the train to the Pompano Beach Station. The SFRTA building is South of the station. Parking is available across the street from SFRTA's offices, at the Pompano Beach Station.

PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING OF SEPTEMBER 19, 2007

The meeting will convene at 10:00 a.m., and will be held in the Board Room of the South Florida Regional Transportation Authority, Administrative Offices, 800 NW 33rd Street, Suite 100, Pompano Beach, FL 33064.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

AGENDA APPROVAL – Additions, Deletions, Revisions

DISCUSSION ITEMS

MATTERS BY THE PUBLIC – Persons wishing to address the Committee are requested to complete an "Appearance Card" and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

CONSENT AGENDA
Those matters included under the Consent Agenda are self-explanatory and are not expected to require review or discussion. Items will be enacted by one motion in the form listed below. If discussion is desired by any PTAC Member, however, that item may be removed from the Consent Agenda and considered separately.

C1 – MOTION TO APPROVE: Minutes of PTAC Meeting of July 18, 2007

REGULAR AGENDA
Those matters included under the Regular Agenda differ from the Consent Agenda in that items will be voted on individually. In addition, presentations will be made on each motion, if so desired.

R1 – MOTION TO ENDORSE: Revised SFRTA TDP Minor Update

INFORMATION / PRESENTATION ITEMS
Action not required, provided for information purposes only.

I1 – INFORMATION: 2008 South Florida Transit Summit

I2 – INFORMATION: 2007 Rail-Volution Conference

I3 – INFORMATION: SFRTA Strategic Regional Transit Plan

OTHER BUSINESS: Tri-Rail Parking and Circulation Study (on CD) Distribution

SFRTA EXECUTIVE DIRECTOR REPORTS/COMMENTS

PTAC MEMBER COMMENTS

ADJOURNMENT

In accordance with the Americans with Disabilities Act and Section 286.26, Florida Statutes, persons with disabilities needing special accommodation to participate in this proceeding, must at least 48 hours prior to the meeting, provide a written request directed to the Executive Office at 800 NW 33rd Street, Suite 100, Pompano Beach, Florida, or telephone (954) 942-RAIL (7245) for assistance; if hearing impaired, telephone (800) 273-7545 (TTY) for assistance.

Any person who decides to appeal any decision made by the Board of Directors for the South Florida Regional Transportation with respect to any matter considered at this meeting or hearing, will need a record of the proceedings, and that, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

Persons wishing to address the Board are requested to complete an "Appearance Card" and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

DRAFT

MINUTES
SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC) MEETING
JULY 18, 2007

The Planning Technical Advisory Committee (PTAC) meeting was held at 10:00 a.m. on Wednesday, July 18, 2007 in the Board Room of the South Florida Regional Transportation Authority (SFRTA), Administrative Offices located at 800 NW 33rd Street, Suite 100, Pompano Beach, Florida 33064.

COMMITTEE MEMBERS PRESENT:

Mr. Randy Whitfield, Palm Beach Metropolitan Planning Organization (MPO), PTAC Chair
Ms. Maria Batista, Miami-Dade Transit (MDT)
Mr. William Cross, SFRTA
Mr. Wilson Fernandez, Miami-Dade MPO
Mr. Joseph Quinty, SFRTA
Mr. Jonathan Roberson, Broward County Transit
Mr. Phil Steinmiller, Florida Department of Transportation (FDOT) District 6
Mr. Fred Stubbs, Palm Tran
Mr. Jeff Weidner, FDOT District 4

ALSO PRESENT:

Ms. Ruby Adams, MDT
Mr. James Cromar, Broward County Planning Services Division
Ms. Cassandra Ecker, Carter & Burgess
Mr. Dan Glickman, Citizen
Mr. Eric Goodman, SFRTA
Mr. T. R. Hickey, Gannett Fleming
Ms. Sabrina Kirpatrick, South Florida Commuter Services (SFCS)
Ms. Beatriz Kudaka, SFRTA
Ms. Marisa Lang, Broward County
Ms. Elaine Magnum, SFRTA
Mr. Daniel Mazza, SFRTA
Mr. Michael Moore, Gannett Fleming
Ms. Ellen Ostrowski, SFCS
Ms. Lisa Peterson, FDOT
Mr. Vivck Reddy, HNTB
Mr. Peter Rubio, MDT
Ms. Lynda Westin, SFRTA
Mr. Ravi Wijesundera, Kimley-Horn

CALL TO ORDER

The Chair called the meeting to order at 10:23 a.m.

ROLL CALL

The Chair requested a roll call by the Minutes Clerk.

PLEDGE OF ALLEGIANCE

AGENDA APPROVAL – Additions, Deletions, Revisions

Mr. Jeff Weidner moved for approval of the Agenda. The motion was seconded by Mr. Jonathan Roberson. The Chair called for further discussion and/or opposition to the motion. Upon hearing none, the Chair called the motion to a vote and it was approved unanimously.

DISCUSSION ITEMS -- None

MATTERS BY THE PUBLIC – Persons wishing to address the Committee are requested to complete an "Appearance Card" and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

None.

CONSENT AGENDA
Those matters included under the Consent Agenda are self-explanatory and are not expected to require review or discussion. Items will be enacted by one motion in the form listed below. If discussion is desired by any Committee Member, however, that item may be removed from the Consent Agenda and considered separately.

C1 – MOTION TO APPROVE: Minutes of PTAC Meeting of June 20, 2007

A motion was made by Mr. Fred Stubbs to approve the meeting minutes. The motion was seconded by Mr. Weidner. The motion was called to a vote and carried unanimously.

REGULAR AGENDA
Those matters included under the Regular Agenda differ from the Consent Agenda in that items will be voted on individually. In addition, presentations will be made on each motion, if so desired.

R1 – MOTION TO ELECT: PTAC Chair and Vice Chair for Fiscal Year 2007-08

Chairman Randy Whitfield noted that since this was the first meeting of the new fiscal year, it was time for the election of officers. Mr. Whitfield asked for nominations for chairman. Mr. Weidner nominated Mr. Whitfield, and it was seconded by Mr. Phil Steinmiller. No other nominations were made. Mr. Whitfield was unanimously elected to continue as Chairman. Chairman Whitfield then asked for nominations for Vice-Chair. Mr. Weidner nominated Mr. Joseph Quinty as Vice-Chair, and it was seconded by Mr. Stubbs. No other nominations were made. Mr. Quinty was then elected unanimously to continue serving as Vice-Chair.

R2 – MOTION TO ENDORSE: SFRTA TDP Minor Update

Mr. Michael Moore of Gannett Fleming presented, noting that the agenda item had two parts- the core TDP document containing the FDOT required information, and the numerous technical tasks serving as supplemental analyses. Mr. Moore spoke on the core document, stating that the text followed the same outline used in last year's TDP Minor Update. Listing the past fiscal year's accomplishments is one requirement, and Mr. Moore explained that SFRTA's most noteworthy were the full completion of double tracking and the New River Bridge, the addition of a 50 train weekday schedule in June, and a strong increase in ridership and on-time performance for most of the year. He also mentioned that last year's goals and objectives were updated to reflect other accomplishments and changes, with new goals also added regarding transit oriented development (TOD) and transportation demand management (TDM). Mr. Moore also stated that some changes have been made to the five year project list, and a new fiscal plan has been inserted into the document, reflecting the new budget recently adopted by the SFRTA Governing Board.

Mr. Weidner asked about the large rollover amount in the fiscal plan, saying that it was a large percentage of the work program. He wondered if the "carryover" wording was misleading. Mr. William Cross agreed that carryover may not be the best term for those funds, and said that he would work with to find better wording. Mr. Weidner also commented that the fiscal plan item for feeder bus funds continuing for all five years is incorrect, as it will be $2 million per year only through FY 2009/10. Mr. Quinty apologized for the error, noting that such a change also had to be made to last year's draft version. Mr. Roberson commented that it was likely an inflationary factor was used for the feeder bus instead, and also wondered if the three counties' contributions may change in the years ahead.

Mr. Stubbs made a motion to approve, subject to clarification of the two fiscal issues raised. It was seconded by Ms. Maria Batista. The motion carried unanimously.

The item continued, with Mr. Tom Hickey of Gannet Fleming presenting the onboard survey results, which is one of the TDP's key supplemental technical analyses. He stated that the results show a concentration of origins and destinations in the eastern portions of the region, but was surprised at the number and distribution of origins & destinations to the west. Mr. Weidner suggested that one color be used for all of the origins and destinations, rather than separate colors for the three counties. Mr. Steinmiller also suggested that the same number range/scale for origins and destinations be used throughout the region, rather than the varying numbers and color shades for the three counties. Mr. Roberson asked about the districts used for the origin & destination information, with Mr. Hickey responding that they are the enlarged traffic analysis zones used in the SERPM 6 model.

Mr. Hickey presented other survey findings, which show that Tri-Rail riders are primarily 5 day a week users, with a high amount of station access via car. He pointed out a surprisingly high number of riders reported using their car to get from the station to their final destination, which is unique among commuter rail systems. The results also show a growing number of choice riders using the system, as multiple questions pointed to more passengers with a driver's license, access to a vehicle, and higher household incomes. Mr. Hickey noted that these are positive indicators, but also cautioned that ridership levels can be more volatile when riders have other alternatives. Mr. Hickey and Mr. Moore both offered to make the full draft survey results document available to anyone who is interested.

INFORMATION / PRESENTATION ITEMS
Action not required, provided for information purposes only.

I1. - INFORMATION: 2008 South Florida Transit Summit

No one was in attendance to present this item, so Chairman Whitfield recommended that it be deferred until the next PTAC meeting. There was consensus among PTAC members to do so and the agenda moved on to the next item.

I2. - INFORMATION: Customer Information Network (CIN)

Mr. Quinty introduced the item by reminding the committee that the status of the CIN was raised a few months back by meeting attendees. Mr. Quinty thanked Ms. Adams for attending and being available to share her direct knowledge of the project.

Ms. Ruby Adams, Assistant Director of Customer Services for MDT, introduced herself and Mr. Peter Rubio, of MDT's Technology Information office. She began by providing background for the Consumer Information Network (CIN), noting that the project stemmed from the RTO and became part of the Sun Guide system funded by FDOT District 6. MDT, BCT, PalmTran, and SFRTA/Tri-Rail are its four participating transit agencies. Ms. Adams noted that it became a good seamless regional trip planning system, as someone could call 511 and be directed to the appropriate agency and also provide trip planning by combining modes for trips crossing county lines. These capabilities are also available online. She stated that the service is contracted out with FDOT supplying funding, but the contract is set to expire in November 2008 and all parties are at a crossroads on how to proceed.

Ms. Adams indicated that FDOT will not fund the project after the current contract expires, PalmTran has indicated it will not participate beyond November 2008, and BCT is worried about covering the funding difference once PalmTran withdraws. She said that for the existing five year deal agreement totaling $2.8 million, MDT funds 40%, BCT 30%, SFRTA/Tri-Rail 20%, and PalmTran 10%. Three options on how to proceed were mentioned by Ms. Adams. Option one is to issue a maintenance and support RFP to keep the existing infrastructure operating. Option two is to try and keep the program going using in-house capabilities. And option three is a new possibility, utilizing Google Transit Trip Planning. Ms. Adams noted that a key to making the Google Transit option work is good information to input into the system. She also mentioned that a demonstration by Google is being developed for the region.

Mr. Weidner asked if the $2.8 million figure was for a five year period or annually. Ms. Adams clarified that it is for five years. Mr. Weidner then commented that he thought higher dollar amounts were involved. Mr. Stubbs commended Ms. Adams for her work on the project and confirmed that PalmTran would participate until the contract expires. He added that PalmTran has also been exploring the use of Google Transit and has been pleased with what it has seen thus far. Ms. Adams commented that she is not aware of the exact costs associated with Google Transit as of yet, and is hoping that the demonstration will address this. Ms. Batista asked if Google would get all the funds it needs from ad revenue. Mr. Rubio stated that the likely costs through Google would be minimal, but that all of the transit properties would have to feed detailed information to make it work. Mr. Eric Goodman of SFRTA asked if 511 phone service would remain if the Google option was pursued. Mr. Rubio responded that if Google was chosen then each transit agency would handle its own calls, resulting in a setback to the regional system via phone. Mr. Dan Glickman commented that from what he heard at a recent SFRTA Marketing Committee meeting, he didn't think the CIN's potential demise was a cost issue, but rather a quality issue. Ms. Adams replied that the CIN was the first regional system of this nature and that some kinks and issues were identified, but the costs can affect quality. She pointed out that the technologies in this area are changing rapidly, but additional funding could also enhance the

service. Mr. Stubbs commented that the CIN seemed like a Cadillac at its beginning, but now it appears that new and better technology is available. Mr. Quinty noted that SFRTA recently gained in-house GIS capabilities for the first time, and may be willing to serve a clearing house or coordinator of data if the Google option moves forward. Ms. Adams thanked the committee and offered to return in the future to provide further updates.

I3. - <u>INFORMATION</u>: Kendall Corridor Alternatives Analysis (Kendall-Link Study)

Mr. Wilson Fernandez of the Miami-Dade MPO began his presentation by stating the study is seeking to develop a preferred rapid transit strategy for the area. He also emphasized the study's extensive public involvement efforts, although citizen concerns raised by those living near the CSX corridor have dominated the discussion. Mr. Fernandez stated that the four major corridors evaluated as part of the study's Tier II included Kendall Drive, the H.E.F.T., the CSX rail corridor, and 137th Avenue. He also mentioned that the inclusion of 137th, was the result of public input.

Mr. Fernandez documented the opportunities and challenges for the alternatives within the four corridors. The Kendall Drive BRT and Metrorail alternatives serve a strong east-west travel market and connect to downtown Kendall and Baptist Hospital. The HEFT Metrorail option serves as a continuation of the planned East-West Metrorail Extension near the Dolphin Expressway to Florida International Universiy (FIU). It shows good ridership, but not as strong as the Kendall Drive Metrorail option. DMU service to the future Miami Intermodal Center (MIC) on the CSX right of way is an underutilized corridor, but showed only a moderate market, includes numerous at-grade road crossings, and sparked strong community concerns. And the 137th Corridor performed better than expected, although it is also tied to the East-West Metrorail Extension to FIU. The analysis of these alternatives included FTA cost effectiveness ratings, with the BRT options scoring well, the DMU option doing okay, and the Metrorail scoring poorly.

Mr. Fernandez stressed that findings showed 70% of trips in the study area were oriented east-west or stayed within Kendall. As a result, the study team sought to combine alternatives for a preferred strategy to address existing and future travel needs. Mr. Fernandez shared the proposed preferred strategy, which contains some new components. It is:

-<u>Bus Rapid Transit (BRT) along Kendall Drive</u>- A single reversible dedicated bus lane between SW 157 Ave and SW 97 Ave, and a two lane dedicated transit way from SW 97th Ave east to Dadeland North.

-<u>Diesel Light Rail Transit (DLRT) along the CSX Corridor</u>- Passenger rail service operating along the existing freight corridor from the Metrozoo area to Kendall Drive, then east along Kendall Drive within a two-lane dedicated transitway to the Dadeland North Metrorail station.

-<u>BRT along 137 Ave</u>- Upgrade existing local bus service from SW 152 St to SR 836 with rapid bus type improvements such as signal priority, limited stops, real-time arrival information, and queue jumpers. Longer term improvements may consist of dedicated bus lanes from SW 88 St to the terminus of the Metrorail East-West Corridor line.

-<u>Metrorail Extension from Florida International University area to Kendall Drive</u>- parallel to the HEFT. This is a long term project contingent on the Metrorail East-West Corridor line being constructed to FIU.

Mr. Fernandez stated that the DLRT vehicles would not be FRA compliant and would therefore require a separate track or time separation from freight trains. The new DLRT option would not serve the airport,

eliminates over 30 grade crossings, and avoids northern areas where community concerns were among the greatest. He also noted that DLRT vehicles sharing the Kendall Drive transit way maximizes its investment. Mr. Fernandez closed by sharing the study's next steps, which are to refine the FTA cost effectiveness ratings, develop a phasing plan, and bring to the MPO Board in October.

Mr. Steinmiller asked if the Kendall Drive transit way was at grade. Mr. Fernandez replied that yes, the transit way would be at grade. Mr. Stubbs asked if the BRT would be all day or just peak periods. Mr. Fernandez responded that the BRT would operate on dedicated lanes that would be reversible. Mr. Steinmiller asked if an operation analysis had been performed for how car traffic would be affected. Mr. Fernandez answered that such an analysis was done for an option for two lanes on the entire length of Kendall Drive, but now it is being refined to address the new single lane configuration to the west. Mr. Glickman asked if the FTA analysis performed was done earlier in the process than is the usual. Mr. Fernandez replied that such an analysis is typically done in later phases of such projects, but it is the intent to add a dose of reality on how the alternatives would actually fare in the competitive FTA New Starts process.

I4. - <u>INFORMATION</u>: SFRTA Strategic Regional Transit Plan

Mr. Quinty began this item by reminding the committee that technical study documents were distributed via e-mail shortly after the June PTAC meeting, and limited feedback had been received. He noted that the study's next steps will be creating and testing a combination of corridors to form a network, and then applying the network to various land use scenarios. He then stated that this would be the last chance for any additional corridors to be added to the analysis, as well as for recommendations to be made on the working papers completed to date.

Ms. Cassandra Ecker, Project Manager with consultant Carter Burgess, followed up on Mr. Quinty's comments. Ms. Ecker pointed out some changes that had been made (some per PTAC input at the June meeting) to Working Paper #4. These included the inclusion of a Sample Road rapid bus alternative, the inclusion of the new Kendall Drive BRT and DLRT combination recently proposed as part of the Miami-Dade MPO Study, and the inclusion of an additional FEC alternative between West Palm Beach and the Pompano Beach or Fort Lauderdale area

Chairman Whitfield commented that the Central Palm Beach Corridor Study was just completed, and it recommended a Southern Boulevard route in addition to Okeechobee Boulevard. He wondered if this study should do the same. Ms. Ecker replied that the Okeechobee alternative is faring very well in this study's analysis, and for this sort of macro level effort the Southern peak hour only route may not apply. Mr. Weidner asked if the 95 Express HOV bus routes should be included, and Ms. Ecker replied that they are in the baseline alternative. He also asked about the low number of I-75 station stops, and Ms. Ecker mentioned that it was the intention to keep those limited for better travel times. Ms. Batista asked if the busway max routes should be added, and Ms. Ecker responded that they are also included in the baseline. Mr. Weidner also asked if there was a financial component to the study. Ms. Ecker answered that determining the financial capacity of the region was one of the study's early tasks. Mr. Cross added that it is valuable to see the total needs for all of the region's entities, and to try and determine what funding mechanisms need to be applied. Ms. Ecker also noted that the operating costs and annualized capital costs are included in the individual corridor comparisons.

MONTHLY REPORTS
Action not required, provided for information purposes only.

OTHER BUSINESS

None

SFRTA EXECUTIVE DIRECTOR REPORTS/COMMENTS

There were no Executive Director Reports/Comments at this meeting.

PTAC MEMBER COMMENTS

ADJOURNMENT

The meeting was adjourned at 12:15 pm.

AGENDA ITEM NO. R1

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: SEPTEMBER 19, 2007

AGENDA ITEM REPORT

☐ Consent ☒ Regular ☐ Public Hearing

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
REVISED FY 2007/08-2011/12
TRANSIT DEVELOPMENT PLAN MINOR UPDATE

REQUESTED ACTION:

MOTION TO ENDORSE: South Florida Regional Transportation Authority (SFRTA) FY 2007/08-2011/12 Transit Development Plan (TDP) Minor Update

SUMMARY EXPLANATION AND BACKGROUND:

At the July 18 PTAC Meeting, the committee endorsed the draft version of the SFRTA FY 2007/08-2011/12 TDP Update. However, in the weeks following that meeting, a number of technical analyses related to the TDP document were completed. The findings of these analyses were substantial enough that SFRTA staff wished to add these findings and the subsequent projects/concepts into the TDP document. SFRTA asked for and was granted a one month extension by FDOT to include this additional information.

Attached as Exhibit 1 is the revised SFRTA FY 2007/08-2011/12 TDP Minor Update. The document is substantially different from the previous version in some areas. The following is an overview of the changes made:

-Minor changes to the information included as part of the Goals and Objectives (pp. 2-8)
-New summaries of recently performed "existing conditions" service evaluations, including the *Ridership Survey*, *Shuttle and Feeder Bus Service Analysis*, and *Service Change* (new 50-train schedule) *Analysis* (pp.11-18)
-New summaries of SFRTA's recently completed standalone studies, including the *Limited English Proficiency Assesssment*, *Performance Measures Evaluation*, and *Tri-Rail Station Parking & Circulation Study* (pp. 19-25)
-New analyses related to Rail Operations and Station Performance (pp.26-32)
-A revised list of projects and concepts, reflecting the findings and recommendations of these recently completed technical analyses (pp.33-35)

(Continued on Next Page)

FISCAL IMPACT: Adoption of the TDP FY 2007/08-2011/12 Minor Update will continue SFRTA's eligibility for block grants administered by FDOT, which can provide substantial funding.

EXHIBITS ATTACHED: Revised Draft SFRTA TDP Minor Update Document

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
FY 2007/08-2011/12 TRANSIT DEVELOPMENT PLAN
MINOR UPDATE

SUMMARY EXPLANATION AND BACKGROUND (Continued):

SFRTA Staff requests that the PTAC provide input and endorse this revised version of the TDP FY 2007/08-2011/12 Minor Update. A final draft version will be presented to the SFRTA Governing Board at its September 28 meeting. The SFRTA FY 2007/08-20011/12 TDP Minor Update document must be submitted to the Florida Department of Transportation (FDOT) by the extended deadline of October 1.

PTAC Action:

Approved: _____Yes _____No

Vote: _____ Unanimous

Amended Motion:

South Florida Regional Transportation Authority
Transit Development Plan

FY 2008-2012
DRAFT Minor Update

September 2007

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Table of Contents

Table of Figures

List of Tables

Introduction

In July 2005, the South Florida Regional Transportation Authority (SFRTA) completed its first Transit Development Plan (TDP), a major update covering the period FY 2006 to 2010. The completion of this first TDP made the SFRTA eligible for block grants administered by the Florida Department of Transportation (FDOT). In order to continue eligibility for these block grants, annual updates of the TDP must be completed. As a result, this document is SFRTA's second minor TDP annual update, addressing the authority's operational and capital improvement needs and a five-year implementation program.

FDOT requires all TDPs to contain the following information:

a) Past year's accomplishments compared to the original implementation program;
b) Analysis of any discrepancies between the plan and its implementation for the past year, and steps that will be taken to attain original goals and objectives;
c) Any revisions to the implementation program for the coming year;
d) Revised implementation program for the fifth year;
e) Added recommendations for the new fifth year of the updated plan;
f) A revised financial plan; and
g) A revised list of projects or services needed to meet the goals and objectives, including projects for which funding may not have been identified.

In anticipation of next year's major TDP Update, SFRTA completed a range of supplemental tasks that reinforce goals, objectives, and projects, and that enhance future planning and development. These tasks include the following:

- Ridership Survey
- Service Change Analysis
- Shuttle and Feeder Bus Service Analysis
- Service Sufficiency Analysis
- Limited English Proficiency (LEP) Study Action Plan
- Parking Study Action Plan
- Station Location Criteria
- Existing Station Performance Assessment
- New Station Location Assessment
- Tri-Rail Funding Assessment
- Systemic Elements Review
- South Florida Rail Corridor Operations Simulation

This TDP FY 2008-2012 Minor Update is broken into the following chapters:

Chapter 1: Updated Goals and Objectives
Chapter 2: Existing Conditions
Chapter 3: New Analysis
Chapter 4: Overview of Projects and Concepts
Chapter 5: Fiscal Plan

Appendices are also included to provide additional information, data, analysis, and/or explanation of elements of this update, as necessary.

Chapter One: Goals and Objectives

Numerous changes have occurred and various actions have been taken by SFRTA since the publication of the Authority's first TDP (FY2006-2010) in May 2005 and then again since publishing the TDP Minor Update (FY2007-2011) in August 2006.

Consistent with the SFRTA's legislative and statutory responsibilities, goals and objectives were established as part of the original (FY2006-2010) TDP Major Update. These have been restated and used as a base to document the various changes and actions that have taken place. To assist the reader, changes between these versions of the TDP are color-coded.

SFRTA has identified five goals and 27 objectives for the TDP. These are listed below, each followed by the SFRTA activities and changes that occurred in FY 2007-2011 (shown in blue) and in FY 2008-2012 (shown in green). Two new goals and eight new objectives have been added, reflecting the land use and transportation demand management issues facing SFRTA and the South Florida region as a whole.

Information pertaining to planned activities and direction in future years is also included for some of the objectives.

Goal 1: Develop Cost Effective Transit System

Objectives:

- Establish a performance monitoring system for Tri-Rail and feeder bus operations and any new line-haul bus operations. On-time performance for Tri-Rail trains has been monitored continuously, on both an end-to-end and station-to-station basis. A more broad and detailed set of performance measures for all SFRTA-operated services was examined and developed in FY 2006-07 as part of a study effort led by SFRTA's Planning staff. Performance measures required by the Florida Transportation Commission, which has new legislative oversight over SFRTA, are also under development.

- Establish a preventive maintenance program for SFRTA facilities and vehicles. A new "preventive maintenance" program has not been established due to funding constraints, but some new maintenance enhancements have been implemented. These include a new wheel truing machine, a new sanding system for locomotives, and the addition of a second fuel tank at the Hialeah Yard.

- Identify strategies to employ cost saving measures related to daily SFRTA operations. SFRTA has incorporated refurbished diesel-electric locomotives into Tri-Rail service. These six GP-49 locomotives are more fuel efficient, cutting down on diesel fuel costs. Diesel Multiple Units (DMUs) are also in service, bringing added efficiency and fuel savings.

- Implement intelligent technologies associated with SFRTA operations and facilities, including integration of the I-95 ITS system. The Tri-Rail passenger information system has been upgraded as part of the Segment 5 Double-Tracking project. Real-time information is available to Tri-Rail passengers via improved message boards

and automated audio announcements on all station platforms. Upgraded software has enhanced the real-time train tracking information available on the SFRTA website, as well as available to customer service phone operators. Steps are also being taken to use message boards on I-95 to inform motorists of parking availability at the future expanded park-and-ride lot at the Pompano Beach Station. SFRTA is coordinating with FDOT on an ITS pilot program at the Pompano Beach Tri-Rail Station to divert I-95 users to Tri-Rail during incidents on the highway. Further coordination will be sought with the three counties and other transit agencies to take advantage of ITS facilities and operational improvements. Further examination of incorporating Tri-Rail information into SunGuide operations will also be undertaken. Also, a transit directions and trip planning service is now available online through South Florida Commuter Services. The SFRTA will place additional emphasis on capturing ridership through Transportation Demand Strategies and coordination with the efforts of South Florida Commuter Services. Activity centers and employment centers being served by Tri-Rail will continue to be contacted to enhance these connections.

- Seek opportunities to employ high school and college students as cost-effective and learning opportunities. Such opportunities have not been pursued in the past year, but will be reevaluated for FY 2007-08 and beyond. Several college students were contacted and internship opportunities pursued for summer 2007.

- Identify strategies to decrease fare evasion. Enforcement on the current system has been challenging and may be examined in FY 2007-08. Reexamination of mobile ticket sales may be appropriate in the years ahead.

- Maximize the use of intelligent technology applications by establishing regular coordination with FDOT's SunGuide system and local county governments ITS improvements to assure real-time Tri-Rail information is integrated throughout region.

Goal 2: Expand System Facilities and Operations

Objectives:

- Reduce Tri-Rail headways and feeder bus headways on high demand routes. Some 20-minute headways have been established during portions of the AM and PM peak, due to the expanded service added following the substantial completion of the Segment 5 Double-Tracking Project. SFRTA feeder bus service has also been expanded to match the frequency of Tri-Rail service, to the extent that is financially feasible. Headways have improved with the 50-weekday-train service that commenced June 4, 2007. During the morning peak period, four trains have 20-minute headways, and 5 trains have 30 minute headways. During the afternoon peak period, 6 trains have 30-minute headways.

- Expand Tri-Rail feeder bus operations to improve the interconnections between Tri-Rail stations and major South Florida land uses, including the downtown areas, airports, employers, colleges and beaches. The SFRTA coordinates with the three local bus operators (Miami-Dade Transit, Broward County Transit, and PalmTran) to

ensure that connections exist between Tri-Rail stations and major activity centers and attractions. Service has been expanding as financial resources allow.

- Expand Tri-Rail feeder bus service hours to include weekday evenings, as well as weekends. Some feeder bus routes already serve weekday evenings and weekends. However, no further action has been taken in FY 2005-06. Expansion of feeder bus service will continue to be explored in the years ahead. Modifications to feeder bus services were implemented with the new 50-train weekday service. Coordination with local bus operators will continue in FY 2007-08 to the extent possible, to minimize anticipated service cuts for all transit providers due to budget cuts.

- Seek opportunities to expand the Tri-Rail fixed rail system to serve additional corridors, including completing planning/engineering for the Jupiter and Scripps extensions. Due to the relocation of the future Scripps complex away from the Mecca Farms site, a northwestern Tri-Rail extension along CSX tracks to interior Palm Beach County is no longer being actively pursued. In FY 2006-07, coordination with the SR-710 PD&E Study took place, which is examining transit access to areas near the former Scripps site in the northwest section of Palm Beach County. SFRTA Planning staff will continue to participate in the SR 710 PD&E Study in FY 2007-08.A northern extension to Jupiter is currently being evaluated as part of the South Florida East Coast Corridor (SFECC) study, a comprehensive evaluation of the Florida East Coast Railway corridor being conducted by FDOT. The SFECC Study has completed through Tier I, with Tier II commencing during the summer months of 2007. Since Scripps is now planned to be located in Jupiter, potential transit connections to Scripps are being investigated as part of the SFECC Study.

- Develop a strategy for implementation of regional "premium" bus service spanning County boundaries. Regional premium bus services will be examined as part of the upcoming SFRTA Strategic Regional Transit Plan effort, which will take place throughout FY 2006-07. A number of regional premium bus corridors are under consideration as part of the ongoing Strategic Regional Transit Plan. Coordination and opportunities for regional bus service as part of the 95 Express Managed Lanes project emerged in FY 2006-07, and will continue in FY 2007-08.

- Establish new operation and maintenance facilities to enhance Tri-Rail's performance capabilities. Due to funding limitations, no new facilities have progressed during FY 06-07. A request for TRIP funding for a new car wash maintenance facility was submitted in FY 05-06, but was deemed not eligible by FDOT.

Goal 3: Improve Intergovernmental Coordination

Objectives:

- Work with local governments and private transit providers to coordinate regional transit services with Tri-Rail operations, including feeder buses and paratransit. SFRTA has regular meetings with local transit operators to ensure the compatibility of bus schedules and connections with Tri-Rail operations. Staff also serves on committees/bodies addressing regional short and long range planning needs and prioritization. Some of these committees include the Regional Transportation Technical Advisory Committee (RTTAC), Southeast Florida Transportation Council

(SEFTC), and the SFRTA Planning and Technical Advisory Committee (PTAC). Other members of these committees/bodies include the transit operators for the region's three counties, the region's three metropolitan planning organizations (MPO's), and two regional planning councils (RPC's). The SFRTA's Operations Technical Committee is key to this coordination between transit providers in the region.

- Work with local governments to improve multi-modal facilities, plans and connections to Tri-Rail stations. SFRTA coordinates with local governments on potential upgrades to existing stations, as well as assists with land use and development issues adjacent to existing and potential station locations. Specific projects include the Miami Intermodal Center (MIC) and Tri-Rail's West Palm Beach/Palm Tran hub located at the West Palm Beach Tri-Rail Station. Plans for design and construction of both the MIC and West Palm Beach Intermodal Facility progressed in FY 2006-07, and will continue in FY 2007-08.

- Coordinate with other rail users including CSX, other freight lines and Amtrak to allow for more efficient Tri-Rail operations. SFRTA Operations staff is in continuous contact with CSX. Regular coordination meetings take place between representatives of SFRTA, CSX, FDOT, and Amtrak. Significant coordination efforts were required during the March 2007 CSX tie-replacement project. Further coordination now exists with Amtrak, as they are providing dispatch service over the New River Bridge.

- Pursue opportunities for transit-oriented developments on or near Tri-Rail Station property owned by SFRTA. SFRTA has been working with local governments to pursue transit-oriented development opportunities at the following stations: West Palm Beach, Boynton Beach, Boca Raton, Deerfield Beach, Cypress Creek, and Metrorail Transfer. The SFRTA Governing Board adopted an Unsolicited Proposal Process to help guide transit-oriented development on property owned by SFRTA.

- Coordinate with local governments to develop and apply economic development and land use initiatives to attract transit-oriented development around Tri-Rail stations. SFRTA has retained the services of the South Florida Regional Planning Council (SFRPC) and Treasure Coast Regional Planning Council (TCRPC) to provide expertise and guidance on furthering initiatives to attract transit-oriented development. The RPC's have completed an analysis of current and future land use designations around all Tri-Rail stations, and participated in discussions with local governments regarding this issue. SFRTA currently has direct dialogue with each of the municipalities along the corridor. Maps, current and future land use, and parcel information gathered as part of the RPC effort are now being fully shared and is available on the SFRTA website.

- Coordinate with local governments to identify the needs of disadvantaged populations. SFRTA is reviewing opportunities for workforce housing in the vicinity of Tri-Rail stations. SFTRA has also entered into a JPA with the 79th Street Corridor Neighborhood Initiative to pursue mixed use development that would include workforce housing.

- Coordinate with the Workforce Development Boards of the three counties to ensure that service is supportive of their workforce development programs. On a monthly basis, SFRTA provides complimentary monthly tickets to workforce development entities for clients needing travel assistance while attending work-related training. Additionally, SFRTA Marketing staff provides travel information to workforce representatives, as well as presentations to workforce development professionals to encourage the consideration of Tri-Rail in expanding various job searches. It is anticipated that in the near future, SFRTA Marketing staff will be speaking to regional workforce representatives in hopes of reaching an agreement, whereby workforce entities will purchase Tri-Rail tickets on a regular basis, for ongoing distribution to their clients.

Goal 4: Expand Funding Opportunities for the SFRTA System

Objectives:

- Pursue participation in all future local transit or transportation funding initiatives. During FY2006-07, SFRTA was an active partner in the effort to enact state legislation providing a dedicated funding source via a $2 per day rental car surcharge. Such legislation was passed by both houses of the Florida legislature, but was vetoed by the governor in June and therefore, never made it onto the ballot in the three local counties. During the Spring 2007 legislative session, SFRTA again went to the Florida Legislature and requested support for a dedicated funding source, however no supporting legislation was sponsored. SFRTA's Governing Board indicated an interest in FDOT providing a portion of the I-95 Managed Lanes revenue towards SFRTA's transit operations. SFRTA will continue to seek a dedicated funding source in FY 2007-08.

- Pursue participation in state and federal funding programs, including the new State Strategic Intermodal System (SIS) and the federal transportation reauthorization. The SFRTA has pursued all state and federal funding streams, and continues to seek a dedicated funding source. A dedicated funding source would enhance SFRTA's ability to supply the matching funds required in many programs. During FY 2007, TRIP funds were obtained for (1) rolling stock, (2) Metrorail Transfer Station improvements, and (3) transit-oriented development (TOD) analysis at all Tri-Rail Stations. For the FY 2007/08 application cycle for TRIP funding, SFRTA will be submitting Phase I recommendations from the Tri-Rail Station Parking and Circulation Study. Contrasted with the TRIP program, SFRTA has struggled to have projects included in the SIS program.

- Seek public-private joint ventures to expand the Tri-Rail system, including employer participation in Tri-Rail feeder bus service and local government participation in facilities development. SFRTA has received multiple proposals from private parties expressing interest in partnering in the development of new Tri-Rail stations. Staff has performed initial evaluation of these requests and welcomes additional submittals. A formal Tri-Rail Station Location Criteria was developed to document the opportunities, constraints and costs for potential new stations along the existing South Florida Rail Corridor.

- Identify opportunities to create joint ventures with local community and economic development initiatives. SFRTA has worked with the 79th Street Corridor Neighborhood Initiative in the pursuit of transit oriented development in the vicinity of

the Metrorail Transfer Station. SFRTA has also coordinated with the City of West Palm Beach and Palm Beach County to pursue development of an intermodal center and transit oriented development adjacent to the West Palm Beach Tri-Rail station. In recognition of other funding opportunities for the SFRTA system, Goal 6 has been added to focus on transit-oriented development and related efforts that include collaboration with local redevelopment agencies and economic development efforts.

Goal 5: Increase Customer Safety, Convenience and Comfort

Objectives:

- Improve safety and security on Tri-Rail at stations and on feeder buses. An onboard security camera system has been installed in the passenger seating areas on Tri-Rail trains. Also, in June 2006, a mock security and emergency response exercise was conducted by SFRTA, along with Wackenhut Corporation, Herzog Transit Services, Amtrak, the Broward County Sheriff's Office, and additional law enforcement agencies. For FY2007-08, SFRTA hopes to, pending funding availability, add cameras to the outside of the locomotives to capture activity in the doorways of the cab cars. Also of note, on-board cameras will be operational on Tri-Rail trains in FY2007-08.

- Provide improved station amenities including restrooms, drinking fountains and other amenities that encourage ridership and comfort for passengers. The new Boca Raton Station, as well as other stations upgraded as part of the Segment 5 Double Tracking Project, contains many upgraded features. The Planning Department's Tri-Rail Station Parking and Circulation Study, completed in April 2007, evaluated parking facilities and various other passenger amenities at all Tri-Rail stations. Recommended upgrades were provided as a product of the study.

- Identify new marketing opportunities and expand customer service programs. An aggressive marketing campaign was launched to announce the increased Tri-Rail service starting on March 27, 2006. Increased promotional activities have continued, touting the increased service and improved reliability. The improved reliability has made the Employer Discount Program (EDP) a more attractive and viable alternative. A new promotion for the new 50-train schedule was published in May and June 2007. Known as "Getting You There on the Double," this promotion included full coverage with the three major newspapers, their Spanish-language subsidiaries, radio and TV ads, mailings and a partnership with Dunkin Donuts.

- Provide opportunities for public input and evaluation in the provision and expansion of SFRTA operations and facilities. There are numerous opportunities for the public to provide input into SFRTA's operations and planning. Comments are always welcome through the authority's website (www.tri-rail.com or www.sfrta.fl.gov) and customer service line (1-800-TRI-RAIL or 1-888-GOSFRTA). SFRTA sought and received an unprecedented amount of input during the first months of 2007, when a preliminary version of the new 50-weekday-train schedule was posted on the Tri-Rail website. This rider feedback resulted in some modifications to the new schedule before being adopted. SFRTA holds a monthly "meet and greet" session at one of its stations, where among other activities staff solicits feedback from passengers. There are also public comment periods on the agenda of all SFRTA board meetings and committee meetings, including the Citizens Advisory Committee. All of these

measures have been in place for some time, but no major initiatives to provide additional opportunities for public input were undertaken in FY 2006-07.

- Provide better signage directing people from Tri-Rail park-and-ride lots to Tri-Rail Stations. The new Boca Raton Station and various other upgraded stations as part of the Segment 5 Double Tracking Project have incorporated improved signage and ingress/egress into their design. Additional recommendations for all stations were provided in the Tri-Rail Station Parking and Circulation Study, including recommendations to improve signage and wayfinding.

Goal 6: Stimulate Transit-Oriented Development (TOD) at or near Tri-Rail Station Areas

Objectives:

- Work with local governments in their efforts to amend land use, rezoning, and overlay districts that include TOD initiatives
- Identify joint development opportunities for Tri-Rail owned properties
- Identify existing TOD opportunities in close proximity to the Tri-Rail corridor where enhanced park-and-ride lot facilities may be incorporated
- Conduct a successful Rail~Volution Conference to raise awareness of the benefits of TOD. SFRTA and Miami-Dade Transit are co-hosting the Rail~Volution 2007 Conference in Miami Beach. The conference promotes the role of land use and transit as equal partners in the quest for greater livability and greater communities.

Goal 7: Pursue opportunities to maximize on Transportation Demand Management (TDM) strategies being implemented throughout the region

Objectives:

- Continue to coordinate with South Florida Commuter Services program to assure Tri-Rail participation in Employer Discount Programs (EDP) for qualified places of employment
- Identify additional park-and-ride lot facilities
- Coordinate with local governments who have adopted ride-share ordinances and/or TDM ordinances to promote Tri-Rail opportunities

Chapter Two: Existing Conditions

This chapter addresses the changes that have occurred at SFRTA since the last TDP update, which include noteworthy capital and operational accomplishments, the completion of several detailed service evaluations, and a series of other studies aimed at addressing various identified issues such as parking and performance measures.

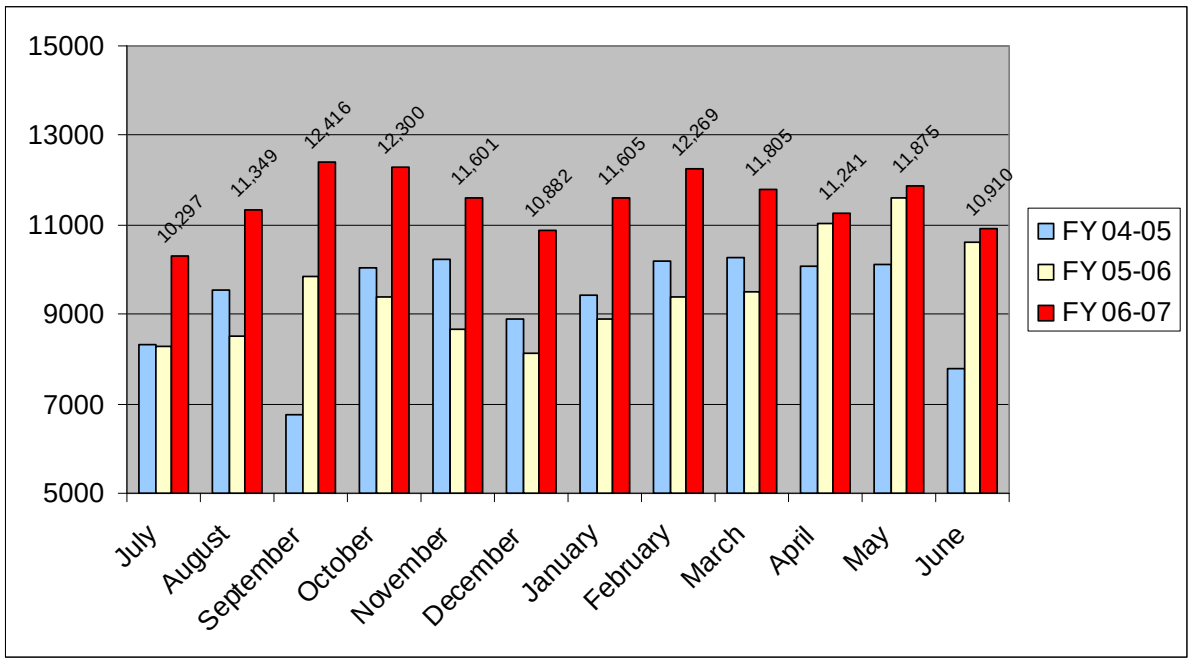
FY 2006-07 Accomplishments

SFRTA's most noteworthy accomplishment during FY 2006-07 was the initiation of a new 50-train Tri-Rail service schedule. Weekday service was expanded from 40 to 50 trains with service every 20 or 30 minutes during the peak periods starting on June 4, 2007. The Sunday and holiday service schedule increased to 16 trains, matching Saturday's service.

This major service improvement milestone for SFRTA is due to a major capital improvement project, itself another major accomplishment by the agency. The completion of the New River Bridge, which was the final step in the Double-Tracking project along the Tri-Rail corridor, was completed and opened to revenue service on April 13, 2007. The completion of the Double-Tracking project, including the New River Bridge, was part of the original implementation program submitted under SFRTA's first TDP for FY 2006 to 2010.

Yet another major accomplishment for the SFRTA in FY 2006-07 was the continued increase in Tri-Rail ridership. Ridership improved each month in FY 2006-07 compared to FY 2005-06 (see figure below). This is directly attributable to the completion of the double-tracking project and introduction of the FY 05-06 expanded service schedule (from 28 trains to 40 trains). Average weekday ridership for the last three fiscal years is shown in the figure below. Figure 1 below highlights the major increase in ridership that began in April 2006 and continued throughout this fiscal year.

Figure 2-1 SFRTA Average Weekday Ridership

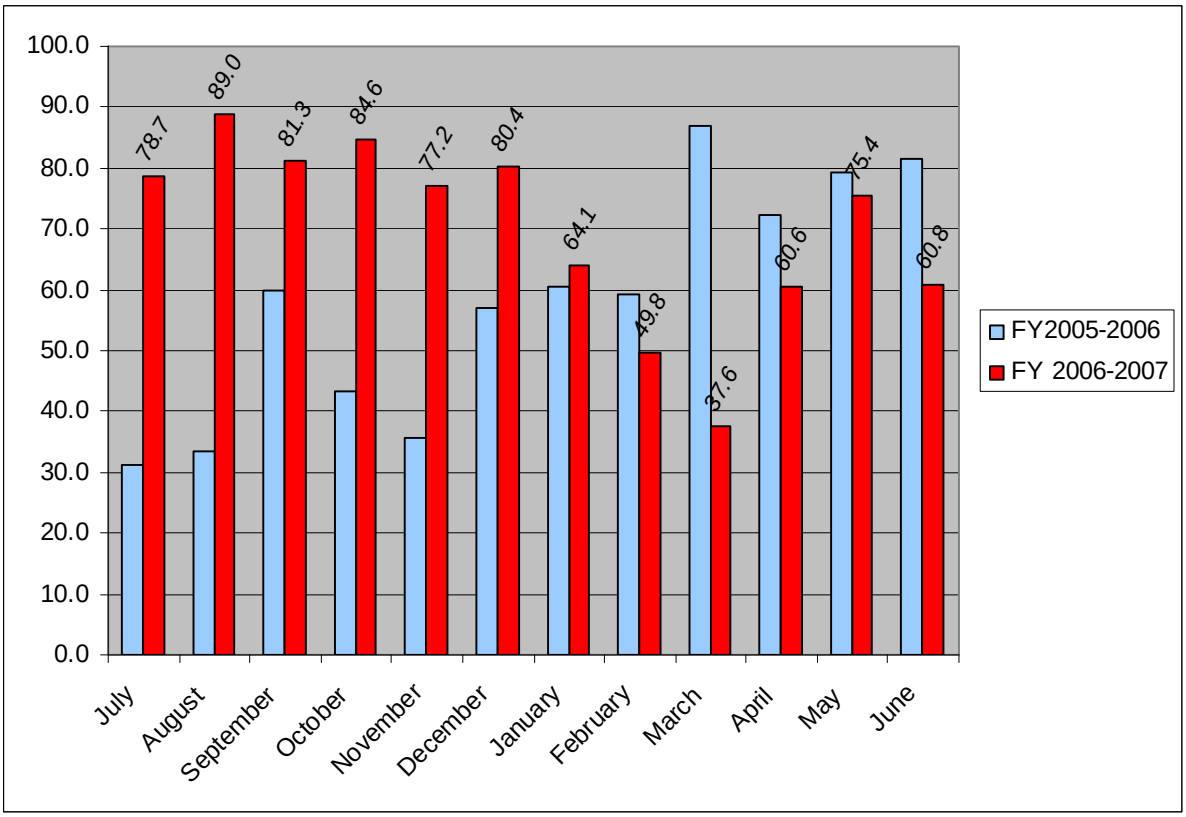


Early observations of Tri-Rail ridership for the summer months of 2007 indicate modest increases. This is expected to continue as transit riders in the region take advantage of the new 50-weekday train schedule.

Figure 2 below presents end-to-end On-Time Performance (OTP) percentage for the past two years. Tri-Rail's staggering improvement in end-to-end on-time performance (OTP) in FY 2005-06, especially in March - June 2006, was a major accomplishment. This figure highlights the major performance improvements starting in March 2006. Between March and December 2006, Tri-Rail OTP was above 75% nine months out of 10, with a high of 89.0% in August. These high OTPs continued throughout 2006 despite the occasional delays due to significant construction activity in the corridor.

During the early months of 2007, OTP began to suffer due to two major activities in the corridor; the completion of the New River Bridge construction and the CSXT tie replacement program. The crowning achievement for the double-tracking project was the completion of the New River Bridge. However, delays from this work affected service and OTP dropped 15%. During the months of February and March 2007, CSXT replaced 100,000 rail ties and this track work affected OTP as well. This graph makes apparent the decline in OTP, particularly during the months of February and March. Upon completion of this track work, on-time performance again rose above 70%. Starting in April 2007, significantly higher on-time performances were registered on both an end-to-end and station-to-station basis.

Figure 2-2 End-to-End On-Time Performance (in percent)



In addition to the achievements detailed above, numerous smaller scale SFRTA accomplishments in FY 2006-07 will also be documented as part of the next chapter.

Service Evaluations

In an effort to enhance the existing Tri-Rail service, a series of Tri-Rail service evaluations were undertaken in the last year. Each analysis is summarized below.

Ridership Survey

To help provide data for this TDP's technical tasks, a survey of passengers on Tri-Rail was conducted on Thursday, March 15, 2007. Surveys were provided in English, Spanish and Creole. A total of 10,214 passengers boarded the SFRTA Tri-Rail service on the survey day. A total of 6,047 valid surveys were completed, resulting in a 59.2 percent response rate. The on-board survey was designed to inquire

1) about this one-way trip
2) information about the rider
3) feelings towards SFRTA's quality of service (i.e., how is SFRTA doing?)

The survey was designed in coordination and cooperation with FDOT and FTA to meet critical data needs to support the update of the regional transportation demand model.

General Passenger Characteristics

Following is a list of the travel and socioeconomic characteristics of the typical rider:

- The typical passenger on Tri-Rail travels *between home and work five days a week*.
- The *predominant mode of access and egress* to/from the Tri-Rail system is *by car*, either driving and parking a car at the station (25%), or by being dropped off by car (27%), for a total of 52%. To reach their final destination after leaving Tri-Rail, the typical passenger is picked up by a car (24%) or drives a car that is parked at the station (18%), for a total of 42%.
- Generally, passengers *have a driver's license and their household has two cars*.
- Passengers on Tri-Rail generally *could travel by car, but choose to ride Tri-Rail* instead.

Origin-Destination Results

The on-board survey provided origin-destination information for Tri-Rail riders that can be used to analyze commuting patterns. Following are graphical displays of the Origin – Destinations data provided from completed surveys containing valid origins and destinations. Figure 2-3 and Figure 2-4 illustrate origins and destinations, respectively, for the three county region. Rider origin and destination patterns were very similar, with each peaking at the northern and southern termini, as well as the Fort Lauderdale/Hollywood Airport, Sheridan Street, and Hollywood Stations.

Figure 2-3 Tri-Rail Rider Origins

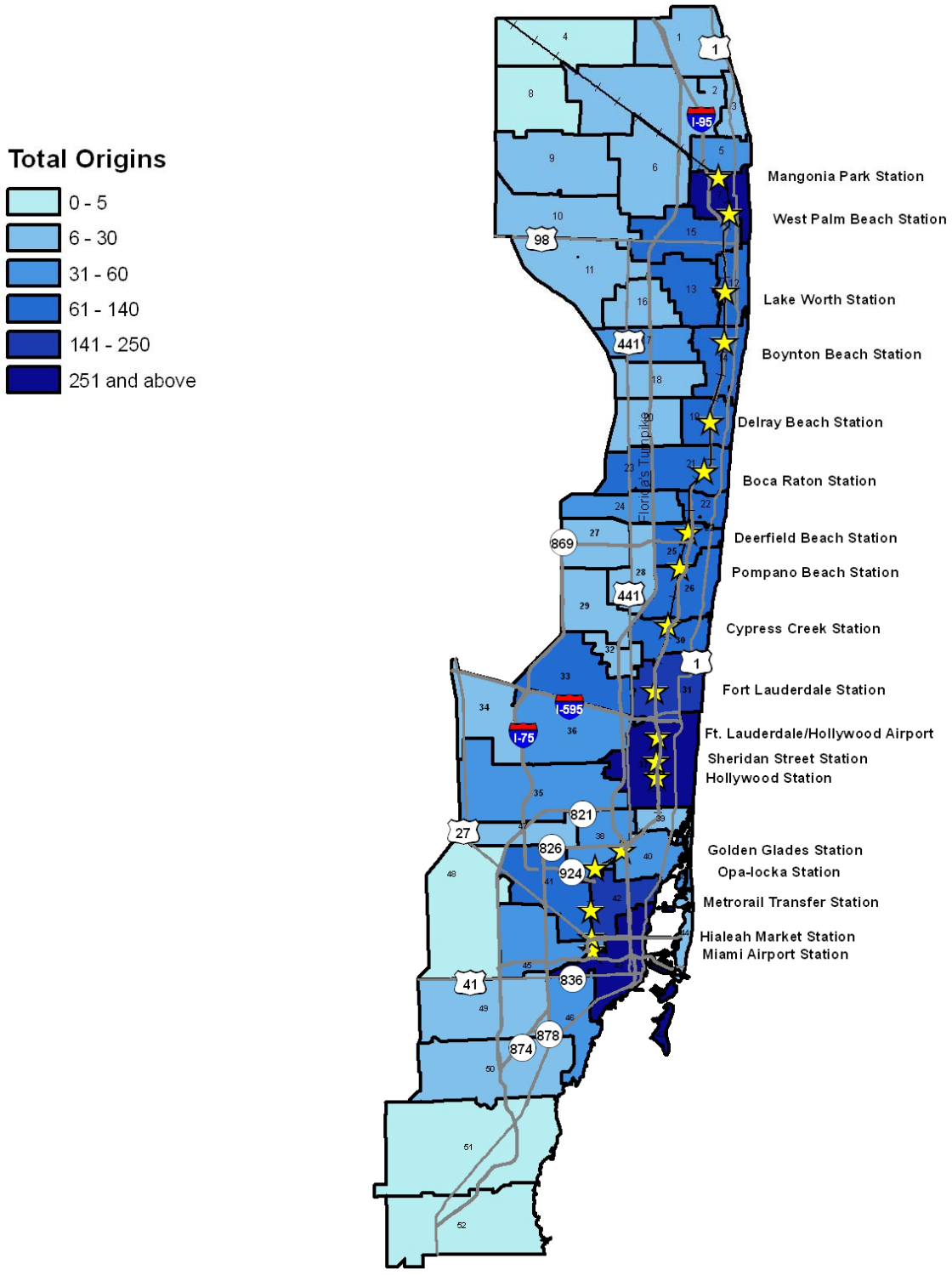
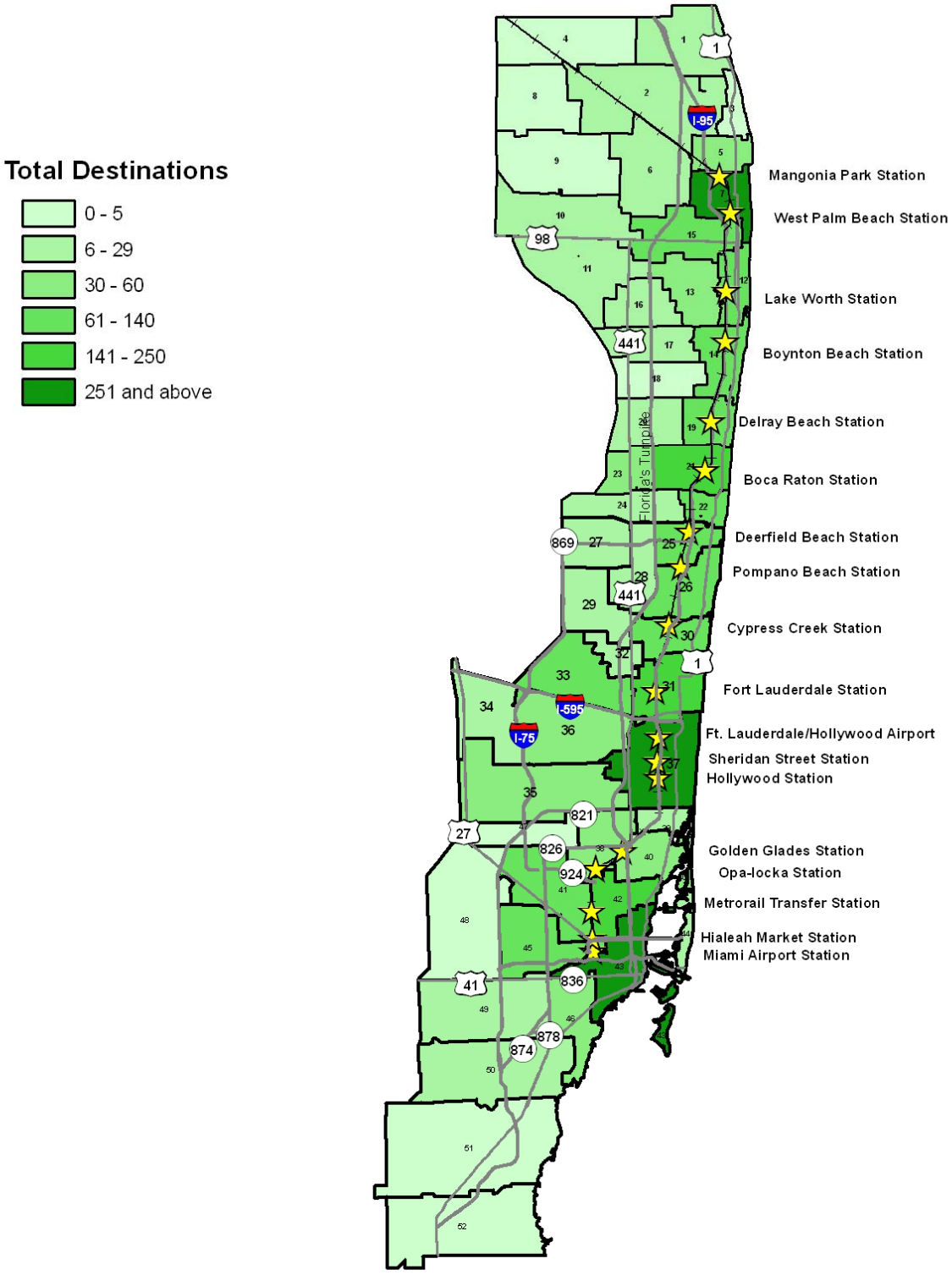


Figure 2-4 Tri-Rail Rider Destinations



Station-to-Station Rider Activity

Based on surveys that contained both an origin station and a destination station, a station-to-station travel matrix was developed. Rider patterns reflect both short trips and long trip patterns (i.e., station-to-station travel). Riders boarding at northern stations tend to deboard before or at Ft. Lauderdale, and if continuing on, at the Metrorail or Miami Airport stations. Another common rider pattern is boarding at the Fort Lauderdale and Hollywood areas, destined for Metrorail Transfer and Miami International Airport.

Table 2-1

										Station Off									
Station On	**MP**	**WPB**	**LW**	**BB**	**DRB**	**BR**	**DFB**	**PB**	**CC**	**FL**	**FLA**	**SS**	**HW**	**GG**	**OL**	**MR**	**HM**	**MIA**	**Grand Total**
MP		6	34	95	21	45	33	16	25	26	26	7	12	18	8	30	1	27	430
WPB			27	68	24	77	39	27	40	52	29	13	17	17	5	65	5	45	550
LW	34	17		16	21	40	23	18	25	30	10	3	23	6	12	39	7	26	350
BB	71	57	7		3	18	6	12	22	32	17	5	9	2	1	36	2	12	312
DRB	33	33	14	5		6	8	12	19	20	13	2	13	9	1	26	3	17	234
BR	62	69	30	6	3		5	5	17	29	23	8	16	8		21	3	33	338
DFB	43	36	13	5	9	6		3	10	26	14	13	9	6	4	46	6	33	282
PB	12	25	12	14	6	16	4		3	11	9	5	6	15	3	62	1	26	230
CC	21	31	30	16	14	30	10	2		7	6	4	15	6	2	59	7	36	296
FL	30	41	14	21	19	48	30	11	5		3	3	6	20	9	112	6	40	418
FLA	13	18	2	11	10	17	10	5	12	3		1	1	3	3	96	6	36	247
SS	8	10	2	3	2	20	12	11	3	2	1		1	4	2	71	5	17	174
HW	10	23	14	11	14	27	15	15	21	7	4			4	4	86	7	17	279
GG	17	22	7	8	14	20	18	21	24	22	15	3	8		1	25		17	242
OL	10	2	6	1	2	6	7	11	13	12	5	4	11			6	2	3	101
MR	26	37	32	31	19	18	46	47	69	80	58	65	58	12	2		2	6	608
HM	1	2	5	2	4	8	6	14	11	5	5	4	5	1		1		1	75
MIA	19	39	22	13	10	29	34	26	60	34	42	21	24	8	4	9			394
Grand Total	410	468	271	326	195	431	306	256	379	398	280	161	234	139	61	790	63	392	5560

Station Abbr.	Station Name
MP	MANGONIA PARK
WPB	WEST PALM BEACH
LW	LAKE WORTH
BB	BOYNTON BEACH
DRB	DELRAY BEACH
BR	BOCA RATON
DFB	DEERFIELD BEACH
PB	POMPANO BEACH
CC	CYPRESS CREEK
FL	FORT LAUDERDALE
FLA	FORT LAUDERDALE AIRPORT
SS	SHERIDAN ST.
HW	HOLLYWOOD
GG	GOLDEN GLADES
OL	OPA-LOCKA
MR	METRORAIL
HM	HIALEAH MARKET
MIA	MIAMI AIRPORT

Ridership Satisfaction

Respondents were asked to rate their satisfaction with train service, connecting service, and stations. The respondents' options were 'very poor', 'poor', 'okay', 'good', 'very good', and not applicable.

Table 2-2 summarizes train service satisfaction. Respondents expressed dissatisfaction with on-time performance (60% of respondents rated on-time performance as 'very poor' or 'poor'), restrooms (52% rated as 'very poor' or 'poor'), and number of trains (37% rated as 'very poor' or 'poor'), but all other questions received generally positive ratings. This was encouraging, given the survey was conducted during CSXT's tie replacement efforts, which caused significant Tri-Rail delays.

Table 2-2

TRAIN SERVICE SATISFACTION

Question	Very Poor	Poor	Okay	Good	Very Good
Number of Trains	12%	25%	36%	19%	7%
On Time Performance	29%	31%	23%	11%	6%
On-Board Crew	5%	5%	33%	35%	22%
Cleanliness	9%	13%	36%	30%	12%
Restrooms	29%	23%	26%	16%	6%
Announcements	6%	11%	30%	34%	19%
Door Operations	3%	3%	28%	42%	24%
Air Conditioning	3%	5%	27%	40%	25%
Sense of Security	4%	5%	28%	39%	24%
Overall Value	5%	7%	32%	31%	25%

Satisfaction with connecting transit was high, with over 60% of respondents rating connecting transit elements as very good, good, or okay. Table 2-3 summarizes connecting transit satisfaction.

Table 2-3

CONNECTING TRANSIT SATISFACTION

Question	Very Poor	Poor	Okay	Good	Very Good
No. of Trains/Buses	12%	19%	34%	25%	10%
On-Time Performance	17%	22%	30%	21%	10%
Ease of Connections	11%	15%	34%	27%	13%

Satisfaction with stations was very high, as all station elements were rated as very good, good, or okay by at least 75% of respondents. Parking satisfaction was the highest rated element, with 56% of respondents rating parking as ‘very good’ or ‘good’ (another 30% rated parking as okay). Table 2-4 summarizes station satisfaction.

Table 2-4

STATIONS SATISFACTION

Question	Very Poor	Poor	Okay	Good	Very Good
Announcements	9%	16%	32%	28%	15%
Cleanliness	8%	12%	34%	23%	14%
Helpfulness of Staff	9%	13%	31%	30%	17%
Sense of Security	7%	10%	34%	33%	16%
Parking	6%	8%	30%	34%	22%
Tickets/Ticket Machines	8%	13%	35%	29%	15%

The full Ridership Survey is provided in Technical Memo 3.1.

Shuttle and Feeder Bus Service Analysis

Through a March 2007 on-board survey, it was determined that approximately 19% of Tri-Rail passengers utilize transit bus service as part of their commute, and another 8% of Tri-Rail passengers utilize Metrorail service. SFRTA completed an assessment of connecting

bus services at Tri-Rail stations. This assessment focused on existing station bus service and shuttle route characteristics, and made a series of recommendations for service modifications. Service evaluations in March and July 2007 recorded ridership characteristics of the shuttle buses and found that the Ft. Lauderdale Airport and Downtown Ft. Lauderdale shuttle routes account for nearly 725 riders, over 60 percent of all reported shuttle ridership. Most of the other routes have daily ridership that ranges from 40 to 70 passenger trips per day. The Port Everglades route exhibits the lowest ridership, with less than 10 passenger trips per day. Ridership figures for Tri-Rail passengers using connecting bus services such as Miami-Dade Transit were not available.

Significant bus service observations and recommendations are summarized in the following table.

Table 2-5 Feeder Bus Observations and Service Considerations

Station	Connecting Bus Routes	Nearby Destinations Served	Add'l. Service Considerations
Mangonia Park	Palm Tran Routes 20, 31, 33	St. Mary's Med. Ctr., WPB Veternas Med. Ctr., Gardens Mall, PBCC North Campus	Consider service to Palm Beach Indust. Park (off of Garden Road).
West Palm Beach	Palm Tran Routes 1, 31, 40, 43, 44, 45, 50	Downtown WPB, Palm Bch Mall, Palm Beach Int'l. Airport	Consider dedicated Tri-Rail shuttle service to PBIA (similar to service provided at Ft. Lauderdale and Miami Airports)
Lake Worth	Palm Tran Routes 61, 62	Downtown Lake Worth, Palm Beach Community College (PBCC).	Consider evening service between PBCC and Tri-Rail.
Boynton Beach	Palm Train Routes 70, 71 and Boynton Beach CRA Trolley.	Boynton Beach Mall	
Delray Beach	Palm Tran Routes 2, 70, 81. Delray Beach Shuttle Route 1	Downtown Delray Beach, shopping centers around Military Trail	
Boca Raton	Palm Tran Routes 2, 94, Tri-Rail Boca Shuttle, T-Rex shuttles.	T-Rex. Corp. Ctr., Arvida Park, South Congress, Boca Raton Commerce Centers, Florida Atlantic Univ., Boca Ctr, Boca Town Ctr. Mall	Consider dedicated shuttle service to FAU, similar to what is provided for SFEC.
Deerfield Beach	BCT Routes 92, 93, Tri-Rail Shuttles DB1 and DB2.	Hillsboro, Deerfield Commerce, Newport Center and Powerline Industrial Parks, Deefield Mall	
Pompano Beach	BCT Routes 34, 93, 95, Tri-Rail Shuttle PB1.	Park Central, Copans, Whisp. Lakes Industrial Parks, Broward Comm. College North, Pompano Citi Center	
Cypress Creek	BCT Routes 60, 62, Tri-Rail Shuttles CC1, CC2, CC3.	Corp. Park at Cypress Creek, Pompano Comm. Corp. Ctr., Commercial Blvd. office, industrial businesses.	
Ft. Lauderdale	BCT Routes 9, 22, 81, Westrn XPr, Tri-Rail Shuttles FL1, Sun Trolley	Downtown Ft. Lauderdale, Broward Mall	
Ft. Lauderdale Airport	BCT Routes 4, 6, 15, 16, Tri-Rail Shuttles FLA 1, FLA 2, SFEC Shuttle	Ft. Lauderdale Int'l. Airport, Commerce Park, S. Florida Education Ctr.	
Sheridan St.	BCT Routes 3, 12, 17, Tri-Rail Shuttle SS1	Sheridan St. commerical, N. 29th Ave. business/industrial	
Hollywood	BCT Route 7	Hollywood Mall, Hollywood CBD	
Golden Glades	BCT Routes 2, 18, 441 Breeze. MDT Routes 22, 42, 77, 95's, 105, 122, 241, 277	Sunshine Ind. Park	
Opa-Locka	MDT Routes 32, 42, 105	St. Thomas Univ., Fl. Memorial College, Miami Lakes, N. Dade Commercial Park, Palmetto Lakes Ind. Park. Seaboard Ind. Park	Consider service to one or more nearby industrial parks.
MetroRail/Tri-Rail	MDT Routes 42, 112, Metrorail	Miami Dade Comm. College North Campus, Palm Springs Mile shops	
Hialeah Market	MDT Routes 36, 42, 46, 132 (Koger Shuttle)	Koger Center	
Miami Airport	MDT Routes 42, 37, 57, 238, 133 (MIA Shutle)	Miami Airport, Airport Commerce Centers, Mall of the Americas	Consider service to commerce centers located west of MIA.

The most pressing station bus facility concern is at the Cypress Creek Station. BCT buses utilize the station's parking area, which is not within sight from the station platform. Tri-Rail shuttle routes recently began operating out of an adjacent office building's parking lot, west of the station platform. This has improved accessibility for the shuttle routes; however, there is no signage that directs Tri-Rail riders to this new stop location. Consolidated transit operations that are adjacent to the station platform would substantially improve bus accessibility for Tri-Rail passengers. The 2007 Parking and Circulation Study referenced a vacant SFRTA-owned parcel adjacent to the Cypress Creek station platform. SFRTA is actively pursuing the construction of roads and parking necessary to provide improved shuttle, parking and drop-off circulation on this parcel. Funding is the primary constraint and SFRTA staff is working with partner agencies to identify such funds.

The full shuttle and feeder bus service analysis is provided in Technical Memo 3.3.

Service Change Analysis

SFRTA undertook an analysis of the Tri-Rail schedule change which took effect on June 4th, 2007, shifting operations from 40 to 50 weekday trains per weekday. In general, only comparatively minor conflicts were found with the new schedule, but performance overall has suffered since its implementation. The table below summarizes the decline in average on-time performance immediately after the service change was implemented.

Table 2-6

Period	Overall	Weekdays
40-Train Schedule		
April 2007	60.6%	59.2%
May 2007	75.4%	73.7%
June 1-3, 2007 (before change)	77.1%	72.5%[1]
50-Train Schedule		
June 4-17, 2007 (after change)	58.7%	55.8%
June 18-July 1, 2007 (after change)	62.1%	60.6%

The new 50-train schedule adds trains to a heavily-used, mostly two-track alignment. The heavy use of the railroad by both faster services (Amtrak) and slower services (freight operators) creates conflicts, or near-conflicts which, while not in all cases directly causing delays, oftentimes exacerbating delays as they arise. These conflicts begin to occur in the mid-morning and then occur throughout the rest of the day. These conflicts create situations in which it is either necessary for faster services to operate behind slower services, thus leading to delay, or for faster services to "run around" slower services, by means of "left hand running," creating, effectively, short sections of single track operations in order to attempt to speed trains. Such "run arounds" most often also have the effect of necessitating passenger boarding and alighting from non-traditional platforms, a passenger inconvenience.

Tri-Rail currently makes use of memory or clock-face schedules, where trains depart at uniform, predictable times throughout a given period (e.g. departures from Mangonia Park, off-peak, always on the hour: 10:00 AM followed by 11:00 AM, 12:00 Noon, 1:00 PM, etc).

[1] Only one day is represented in this figure (6/1/07).

Memory schedules are highly desirable from the standpoint of passenger acceptance. They do, however, make the schedule less operationally flexible and may be having an effect on the locations where scheduled conflicts currently occur. It may be possible to shift all times slightly to discover fewer or more manageable conflicts. It may also be possible for freight operators to shift their schedules slightly to produce scheduled “meets” in more desirable locations.

Three other options are also possible in declining order of desirability. The first is to “uncouple” peak hour memory schedules from off-peak. A second would be to build-in additional time in the schedule at certain strategic locations, for certain trains, to allow for more desirable “meet” locations. Lastly, memory schedules could be deviated from slightly - always later, never earlier - than the expected time.

The full service change analysis is provided in Technical Memo 3.2.

Other Studies

Several other studies were performed during the last fiscal year, including an evaluation of limited English proficiency (LEP) services, a performance measures study, and a parking and circulation study. Each of these studies is summarized in this section, and an action plan pertaining to the five-year scope of this TDP is provided for each study.

LEP Study Action Plan

In January 2007, the South Florida Regional Transit Authority (SFRTA) completed an LEP Program Assessment in response to a Federal Transit Administration (FTA) review. The assessment addressed the ability of persons with limited English proficiency to use SFRTA transit services, for instance if information provided by SFRTA was in languages other than English when needed. For the purposes of the assessment, SFRTA used U.S. Census 2000 data, local transit agency data, and an on-board survey to identify the number of LEP populations within the Tri-Rail service area and which languages they spoke other than English. The US Census information highlighted the following:

- 5.1% of the population in Broward County within the Tri-Rail study area do not speak English well or at all
- 21.1% of the Miami-Dade County population within the Tri-Rail study area do not speak English well or at all
- 4.9% of the Palm Beach County population within the Tri-Rail study area do not speak English well or at all
- In Broward County, higher concentrations of LEP populations were found at Pompano Beach, Cypress Creek and Ft. Lauderdale Stations.
- In Miami-Dade County, all of the Tri-Rail stations have high concentrations of LEP populations, with the Metrorail Transfer Station and the Miami Airport having the highest concentrations
- In Palm Beach County, higher concentrations of LEP populations were found at Mangonia Park, West Palm Beach, Lake Worth, Boynton Beach and Delray Beach Stations.

Results from the on-board survey conducted in October 2006 indicated that Spanish was the largest native non-English language spoken (18.7% of those surveyed), and 57.6% of these riders reported that they read and understood English poorly, very poorly, or not at all. Haitian Creole was the second largest native non-English language spoken (5.7% of those surveyed), and 27.3% of these riders reported that they read and understood English poorly, very poorly, or not at all. Individuals who had low English proficiency used the Tri-Rail service fairly frequently. 33% of this population used the system 5 to 7 days a week, 12% used Tri-Rail 3 to 4 days a week, and 15% used Tri-Rail 1 or 2 days a week. Finally, survey data indicated that languages other than Spanish and Haitian Creole represent a very small portion of Tri-Rail's ridership.

Currently, Tri-Rail does provide some of its written and audio information in Spanish, Haitian Creole, and French. Tri-Rail's new ticket vending machines, currently in the procurement process, are scheduled to be re-programmed to allow up to four languages. The ability to use up to four languages had been requested in the technical specification. Additionally,

conductor announcements are performed in English only, which was noted as a concern in the on-board survey.

Recommendations
The action items for this assessment included providing vital Tri-Rail information in English, Spanish, and Haitian Creole for the following services:

- "Way to Go" Rider Information Publication (currently only in English)
- Station Announcements (currently Haitian Creole not included)
- Station Signs (currently Haitian Creole not included)
- Electronic Message Signs (currently Haitian Creole not included)
- Notice of Availability for Alternate Format Tri-Rail information (currently Haitian Creole not included)
- Conductor announcements (currently only in English)

A limited amount of budget has been allocated in the past by Tri-Rail to provide translated materials and Spanish courses for its staff.

Additional Recommendations Under Consideration

- Additional funds should be allocated prior to the next FTA review to have all vital printed materials (as indicated above) in the three most prominent languages within the Tri-Rail service area (English, Spanish, and Creole).
- Translations of station signs and electronic signs, and the new four-language ticket machines should be focused on those stations identified in the assessment to have the highest concentrations of LEP populations.
- Automate conductor announcements in three languages and/or provide electronic message signs in three languages inside the vehicles.

Elements of the LEP study recommendations have already been implemented. For example, the new pocket schedule for the 50-train schedule includes Creole as recommended.

The full LEP Study Action Plan is provided in Technical Memo 3.5

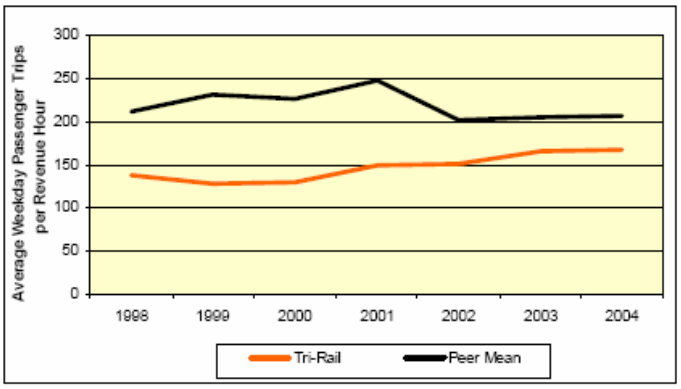
Performance Measures Study Action Plan

In the first Transit Development Plan in July 2005, performance evaluation measures were used to compare Tri-Rail performance to similar-sized commuter rail lines throughout the country. In the fall of 2006, under a separate contract, SFRTA completed another peer review analysis of standard performance measures using the National Transit Database (NTD) for comparison purposes. The same peer systems were used in this analysis as were used in 2005. The results of this analysis were as follows:

- Although Tri-Rail's route miles have remained constant at 140 miles, Tri-Rail's route miles are 7% higher than the peer group average.
- Tri-Rail continues to provide a longer service day than any of its peers (18 hours per day versus 16 hours).

- Tri-Rail's average weekday ridership has grown 21% between 1998 and 2004, whereas the peer system average declined 4% in the same period. Therefore, Tri-Rail's ridership is now even with the peer system average.
- Tri-Rail's average weekday trip length is 30 miles (meaning an average passenger is traveling nearly half the length of the rail line) compared to the peer group average of 25 miles per trip.
- Tri-Rail exceeds the peer mean for average weekday passenger miles traveled by almost 20%.
- Average weekday train revenue miles have remained flat at 2,000 miles. This reflects a static level of service prior to the double-tracking project completion. However, this measure is higher than all but one operator in Tri-Rail's peer group.
- Tri-Rail's 56 average weekday train revenue hours of operation in 2004 were 21% higher than the peer group average. This means that Tri-Rail offers more service most of the day than do other systems.
- Tri-Rail's average weekday passenger trips per revenue hour increased by 20% between 1998 and 2004, reflecting an increase in ridership without an increase in service.
- In 2004, Tri-Rail's cost per trip ($8.95) was below the peer group average ($10.35), indicating efficiency in the annual operating cost per passenger trip measure.
- Although Tri-Rail's annual operating cost per hour increased 21% between 1998 and 2004, it remained the lowest of all the operators included in the peer group analysis.

Figure 5 Passenger Trips Per Revenue Hour



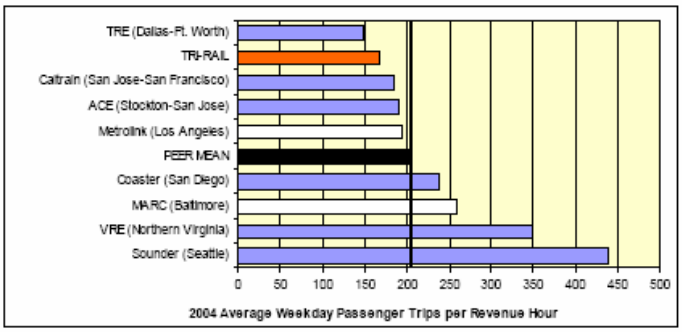
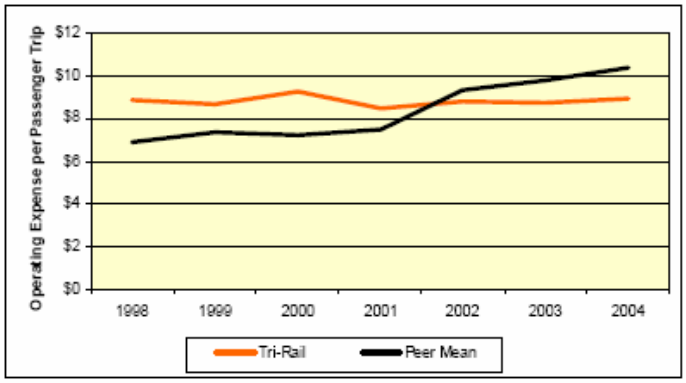
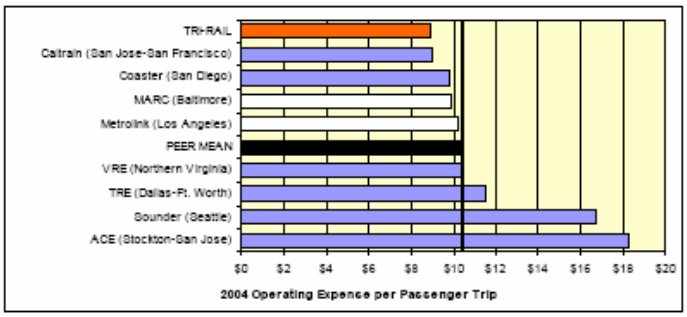


Figure 6 Operating Expense Per Passenger Trip





Overall, and consistent with the 2005 peer review analysis, Tri-Rail continues to stand out among its peers. Of note, neither of these two efforts were able to address performance measures for Tri-Rail's shuttle bus service. SFRTA shuttle bus measures were attempted as part of this recent effort, but were not calculated due to data shortcomings.

A broader and more detailed set of performance measures were developed at SFRTA's request. These measures are more current and valuable for planning purposes and more up-to-date than those based on older NTD data. These measures were developed to support SFRTA's internal decision-making and to better describe the regional benefits of Tri-Rail. The measures were focused on average weekday and average Saturday and Sunday service, and were developed to capture the effects of service changes in FY 2006 (June 2005 through March 2006) and FY 2007 (April 2006 through December 2007). The following were the significant measures and results from the data collected:

- Tri-Rail's average trips per day on weekdays rose from 30 to 40 between FY 2006 and 2007. Average Saturday trips went from 14 to 16, and on Sundays rose from 12 to 14.
- Average weekday revenue hours rose from 57 in FY 2006 to 73 in FY 2007, on Saturdays from 27 to 29, and on Sundays from 24 to 26.
- Average daily revenue miles rose from 2,041 to 2,527 on weekdays, on Saturdays from 1,004 to 1,197, and on Sunday from 881 to 1,004 between FYs 2006 and 2007.
- Average weekday ridership rose from 8,727 in FY 2006 to 11,388 in FY 2007 and average weekday boardings per revenue hour rose from 153 to 156.
- Average Saturday ridership rose from 3,702 in FY 2006 to 4,507 in FY 2007 and average Saturday boardings per revenue hour rose from 137 to 155.
- Average Sunday ridership rose from 3,177 to 3,760 and boardings per revenue hour rose from 132 to 145 between FYs 2006 and 2007.
- End-to-end on-time performance went from 50% on weekdays in FY 2006 to 80% in FY 2007, from 55% to 85% on Saturdays, and from 55% to almost 90% on Sundays.
- Average weekday occupied parking spaces increased from 1,964 in FY 2006 to 2,902 in FY 2007.
- Only 60% percent of park and ride lots were less than 80% full in 2007, with another 35% of the lots over 80% full and 5% of the lots 100% full. This indicates a higher usage of these facilities than in 2006, where over 80% of existing lots were less than 80% full with only 10% of the lots above 80% full and another 10% were 100% full.
- Weekday percent of trips that arrived by car increased from 45% to 51% between FYs 2006 and 2007.
- Vehicles removed from I-95 annually increased from 1,975,731 to 2,651,827 between FYs 2006 and 2007.
- Average weekday passenger miles traveled increased from 276,629 in FY 2006 to 360,977 in FY 2007. On Saturdays, the miles rose from 117,082 to 142,531, and miles rose on Sundays from 100,078 to 118,431.
- Operating cost per boarding increased from $12.49 to $13.15 between FY 2006 and FY 2007, and per train revenue hour rose from $1,905 to $2,135.

The major conclusions from this additional analysis were that Tri-Rail's increased service resulted in increased ridership throughout the week and weekend, increased demand on park-and-ride lots, and continued cost-effectiveness in operations.

Other levels of performance analyzed were those based on the Transit Capacity and Quality of Service Manual (TCRP Report 100). With respect to these measures, Tri-Rail scored poorly on household density served (Level of Service F), employment density served (LOS E), end-to-end on-time performance (one late transit vehicle every day- LOS E), headway frequency in the mid-day (LOS E), and for headway frequency in the off-peak direction (LOS D). All other measures analyzed, including span of revenue service, travel time savings (auto vs. rail travel time), and headway frequency in the peak direction were a Level of Service C and above. Note that these measures include feeder bus service.

Table 2-7

Average Weekday Rail Measures	FY 2007	
	Performance	LOS[1]
1. Span of revenue service	18 hours	B
2. Frequency		
Headway peak (peak direction)	20 minutes	C
Headway peak (off-peak direction)	30 minutes	D
Headway off-peak (mid-day)	60 minutes	E
3. On-time performance, end to end	79%	E
4. Service Coverage		
% of population in service district with bus access to the station (within 1/4 mile)	35%	F
% of employment in service district with bus access to the station (within 1/4 mile)	50%	E
5. Auto vs. rail travel time	LOS A to C	A - C

Comprehensive tables showing Level-of-Service Measures are provided in Appendix B. These tables, developed as a part of the TCRP 100 work, included ranges of LOS for (1) span of service revenue service, (2) frequency, (3) on-time performance, (4) service coverage, and (5) auto versus rail travel time difference.

Recommendations

Action items for the TDP based on these results include:

- Resolve data issues so that a shuttle bus performance review may be conducted
- Establish a consistent data collection process for performance measures
- Monitor the performance measures on an annual basis with TDP updates
- Provide additional connections between Tri-Rail stations and major household and employment densities via coordination with other regional transit operators
- Identify opportunities for additional park-and-ride facilities, consistent with a proposed new goal and required to meet the higher demand on park-and-ride lot facilities

The full Performance Measures Study Action Plan is provided in Technical Memo 3.6.

Parking Study Action Plan

A parking and circulation study was conducted in 2006 and 2007 for all Tri-Rail stations. The study included, for each station area:

- A detailed inventory of parking, circulation, and other infrastructure elements currently in place
- Survey of modal split for passengers arriving at each station in the morning peak two hour period
- Parking lot occupancy counts
- Projections of future parking demand
- A proposed site plan indicating recommended improvements
- A table of recommended immediate, short-term and long-term improvements with probable costs

The study highlights some issues that are common to a number of stations across the system. These issues include:

- Landscaping and maintenance issues
- Poor or non-existent signage, both for on-site direction and off-site wayfinding
- Degraded pavement markings
- Confusing on-site circulation
- Discontinuous pedestrian connections
- Lack of adequate amenities such as benches, shelters, bicycle racks, and lockers

In addition, the conceptual site plans indicate specific improvements recommended at each station site. Many of these recommendations are extremely long term and will not be required to handle parking or circulation expected in the foreseeable future. The recommendations are summarized its recommendations by timeline (before 2010, 2010-2015, 2015-2020, after 2020). This memorandum does not address the recommendations for periods after 2015 since the TDP only deals with a 5-year capital program. The following table addresses the recommended improvements for each station and indicates how these should be addressed by SFRTA in the 5-Year capital program. Following the implementation of these early improvements, additional evaluation of the parking and circulation requirements at each station should be carried out. In general, when parking occupancy reaches approximately 85% at a location, a station-specific feasibility study should be carried out to determine the best way to meet increased parking demand in a cost effective way, before investing in major new infrastructure.

Some recommendations are universal and are not included in the following table on a station-by-station basis. These include the possibility of adding bicycle racks and lockers, bus shelters and benches, and other miscellaneous pedestrian improvements.

It is recommended that a coordinated program to address bicycle and pedestrian issues system-wide be developed. Pedestrian access and amenities could be improved at virtually all stations. Improvements should be packaged in groups of between three and six stations

to distribute capital cost over the course of the 5-year capital program. Improvements should at minimum include:

- Pedestrian and bicycle access improvements, including sidewalks, bicycle lanes, and pedestrian connections between private parking lots, developments, and Tri-Rail stations
- On-site amenities to include bicycle racks, lockers, benches, and shelters.

The table below outlines a proposed pedestrian and bicycle amenities schedule.

Table 2-8

SYSTEMWIDE PEDESTRIAN AND BICYCLE AMENITY IMPROVEMENTS SCHEDULE				
	FISCAL YEAR			
Station	**FY 08-09**	**FY 09-10**	**FY 10-11**	**FY 11-12**
Mangonia Park		X		
West Palm Beach	X			
Lake Worth		X		
Boynton Beach				X
Delray Beach		X		
Boca Raton		X		
Deerfield Beach		X		
Pompano Beach			X	
Cypress Creek			X	
Ft. Lauderdale	X			
Ft. Lauderdale Int'l Airport			X	
Sheridan Street				X
Hollywood			X	
Golden Glades				
Opa-Locka	X			
Metrorail Transfer		X		
Hialeah Market			X	
Miami Int'l Airport				X

The full Parking and Circulation Study Action Plan is provided in Technical Memo 3.7.

Chapter Three: New Analyses

In addition to those projects and studies aimed at improving or better understanding existing conditions, a series of studies were undertaken to advance future planning and development at SFRTA. Portions of these new analyses were done in anticipation of next year's major TDP update. These studies generally addressed one of two issues: rail operations or station performance and assessment.

Rail Operations

Service Sufficiency Analysis

The purpose of this analysis was to analyze existing Tri-Rail ridership patterns, and to determine if an alternative train operating schedule might better serve riders. The primary basis for this analysis was from an on-board survey conducted on Thursday, March 15, 2007, when Tri-Rail was still operating a 40-train weekday schedule.

Significant findings of Tri-Rail's weekday ridership patterns are as follows:

- Over 70 percent of Tri-Rail's ridership occurs in the a.m. and p.m. peak periods.
- Ridership is fairly heavy in both directions in the peak periods. There is a 60% northbound/40% southbound directional split in the a.m. peak period, and a 50/50 directional split in the p.m. peak period.
- The maximum individual train trip line load occurred in the northbound direction between the Boynton Beach and Lake Worth stations, with 430 passengers on Train P606.
- Ridership activity is fairly significant at both end-of-lines, with substantial ridership activity at the north end stations (Mangonia Park and West Palm Beach, and substantial ridership activity at the South End (Metrorail/Tri-Rail and Miami Airport).
- Hialeah Market and Opa-Locka had the lowest ridership activity.

Various commuter rail systems operate turnbacks, limited stop and express stop service. These operating scenarios are more common for commuter rail systems with a high level of train service. Tri-Rail's ridership patterns do not appear to support turnback operations, given the high level of ridership activity at both end-of-lines.

An "A-B" limited skip stop service was considered for Tri-Rail to determine its impact on travel times. It was determined that there would be significant operational issues to overcome regarding the existing two-track configuration and the current complex scheduling of Tri-Rail, freight and Amtrak trains. The likely maximum travel time savings for an "A-B" skip-stop service is only 5 to 10-minutes for long-distance trips. Given the fairly even levels of ridership activity along the entire line, and given the operational complexities that would need to be addressed with increased train service, skip-stop operations are not recommended at this time.

Express train service, which can provide significant travel time savings, was also evaluated. This ridership analysis does indicate that there are significant numbers of riders going to/from the Metrorail/Tri-Rail station. However, there are also substantial numbers of riders

that are completing their trip at stations north of this station. Thus, an express train service to Metrorail/Tri-Rail in lieu of all-stop service would adversely affect these riders.

Therefore, no changes are recommended to Tri-Rail's current all-stop, end-to-end train service at this time. A reassessment of ridership patterns would, however, be beneficial after a sustained period of operation of the 50-train schedule that was recently implemented. Further analysis should also take place after SFRTA assumes dispatch duties along the corridor.

The full analysis is provided in Technical Memo 3.4

Systemic Elements Review

The relationship between Tri-Rail's existing and planned system and other planned regional transit projects was summarized. Overall, the Tri-Rail corridor and service is critical to making viable regional service for travel within and between the counties and cities. The Tri-Rail current and proposed service can successfully work with other regional and urban projects to complement the airports and seaports with mass transit connections to them and between them. The table below summarizes this review.

Table 3-1
Selected South Florida Premium Transit Projects with Direct or Indirect Linkage to Tri-Rail (generally ordered from south to north)

Name/ Location	Limits	Lead Agency	Funding Agency/ Status In FTA Program	Anticipated Opening Year	Relationship to Tri-Rail
Kendall-Link, Miami-Dade County	From: along Kendall Drive (SW 88th Street) from the Dadeland area To: SW 157th Avenue	MPO	No FTA funding sought. Alternatives Analysis (AA) underway to define and/or recommend a Locally Preferred Alternative (LPA)	TBD	May have link to Tri-Rail via Metrorail, depending on final alignment
City of Miami Downtown Streetcar, Miami-Dade County	From: Downtown Miami (Loop) up NE 2nd Avenue, through MidTown Development To: Miami Design District (Loop)	COM	No FTA funding sought.	2009-2010	link to Tri-Rail via Metrorail
MIC-Earlington Heights Metrorail Connector, Miami-Dade County	Earlington Heights Metrorail station to Miami Intermodal Center	MDT	No FTA funding sought. DEIS and EA approved April 2006.	2011	link to Tri-Rail via Metrorail
Metrorail North Corridor, Miami-Dade County	From: Dr. Martin Luther King Jr. Metrorail Station to Broward/Miami-Dade County line	MDT	FTA/MDT ROD issued April 2007. Recommended Rating.	2014	link to Tri-Rail via Metrorail
Miami-Dade County East – West Corridor Transit, Miami-Dade County	From: Florida International University (FIU) and SR 821/Homestead Extension of the Florida's Turnpike (HEFT) To: MIA/MIC	MDT	Supplemental DEIS underway.	2016	link to Tri-Rail via Metrorail and Miami Intermodal Center
Transit Bridge Project on SR 7/US 441, Southern Broward/ Northern Miami-Dade Counties	From: Golden Glades Interchange (Miami-Dade County) To: I-595 (Broward County)	BCT/MPO MDT	Funded for the PE stage only (underway), no FTA funding sought.	TBD	link to Tri-Rail at Golden Glades Station

Name/ Location	Limits	Lead Agency	Funding Agency/ Status In FTA Program	Anticipated Opening Year	Relationship to Tri-Rail
Central Broward East-West Transit Corridor on I-595, Broward County	From: I-75/Sawgrass Expressway interchange To: East of I-95 in the vicinity of Downtown Ft. Lauderdale and the Ft. Lauderdale/Hollywood International Airport (FHIA)	FDOT District 4	FTA funding sought. Refining LPA (as an LRT) and the New Starts funding submittal.	2022	link to Tri-Rail at Ft Lauderdale Tri-Rail Station
DDA Downtown 2nd Street/ Andrews /3rd Avenues Rail Link, Broward County	From: Davie Boulevard To: Sunrise Boulevard AND From: S.W. 4th Avenue To: Federal Highway	BCT	LPA 2006	2009	Indirect link to Tri-Rail
SR 7 RBT, Broward County	From: Golden Glades Interchange (Miami-Dade County) To: Florida Atlantic University (Palm Beach County)	BCT/FDOT District 4	Combination of local and DOT funding, 1st three years funded as a demonstration project with permanent funding in the fourth year as warranted.	TBD	link to Tri-Rail at Golden Glades Station
Broward County Intermodal Center and People Mover (Airport/ Seaport Connector), Broward County	From: FHIA To: Port Everglades	Broward County FTA Coop. Agency	FHWA PD&E underway, FDOT District 4 liaison to FHWA and FTA (MOU currently under draft)	2010-2016	Indirect link to Tri-Rail
Central Palm Beach County Premium Transit Study (aka Okeechobee Blvd BRT), Palm Beach County	From: Wellington Mall To: Tri-Rail West Palm Beach Station	SFRTA/ PBMPO	SFRTA/ PBMPO (50% funding split for the study only)	TBD	link to Tri-Rail at West Palm Beach Station
Tri-Rail North Extension to Jupiter, Palm Beach County	From: West Palm Beach To: Jupiter/Northeastern Palm Beach County Area	SFRTA	Now incorporated into the SFECCTA	TBD	Extension of Tri-Rail from West Palm Beach or Mangonia Park Station
South Florida East Coast Corridor Transit Analysis, Palm Beach, Broward and Miami-Dade Counties	From: Jupiter To: Miami	FDOT District 4	Tiered Programmatic Environmental Impact Statement underway	TBD	Multiple connections to Tri-Rail are being examined

The full Systemic Elements Review is provided in Technical Memo 3.12.

Rail Corridor Operations Simulation

A rail operations simulation model for the South Florida Rail Corridor has been developed, inclusive of Tri-Rail, Amtrak, and CSXT train operations. The purpose of the model, designed using Rail Traffic Controller (RTC) software, is to provide SFRTA staff with a detailed analytical tool with which to simulate alternative corridor train operations and their interaction with the signal system, predict and analyze sources of delay, and quantify the operational benefits of proposed changes in infrastructure.

Station Performance and Assessment

Station Location Criteria Study

The primary purpose of developing criteria is to have a benchmark against which to judge proposals for new stations when they are raised either by a local government or a private

developer, and to provide proposers an idea of the level of investment involved in creating a new properly-functioning station.

SFRTA has no existing criteria relating to station locations. Therefore, through internet research and phone interviews, existing criteria for peer commuter rail stations were obtained for background information. Systems reviewed included:

Trinity Railway Express – Dallas/Fort Worth
Virginia Railway Express – Northern Virginia
Coaster – San Diego
Sounder – Seattle
Northstar – Minneapolis/St. Paul
SEPTA – Philadelphia
NJ Transit – New Jersey

The first four systems listed are regarded as peers of the Tri-Rail system in **TCRP Report 100 - *Transit Capacity and Quality of Service Manual.*** Northstar, SEPTA, and NJ Transit were also included as systems with extensive criteria.

The initial finding upon peer review is that *there is no agreed-upon industry standard for station location criteria*. Additionally, no reviewed system had a formalized list of criteria used for addition, retention and elimination of stations. Some systems have criteria for new stations; others have standards for station elimination. But no reviewed system's location criteria matched the requirements of this task. Therefore, a set of criteria has been created which combines elements from each system, modified to best suit Tri-Rail system conditions.

Reviewed criteria varied in both addressed elements and in applicability to Tri-Rail. The following station location criteria were created:

Distance Between Stations
Ideal spacing of 3 to 4 miles between stations, though a 2-mile minimum is allowable in some situations

Minimum Daily Boardings
The recommended minimum standard for keeping a station open is 100 daily boardings. For new stations, the recommended minimum standard is 350 daily boardings.

Station Access
Wherever possible, stations should be located adjacent to an existing railroad grade crossing to minimize the need for costly station infrastructure and to maximize visibility of the station for customers arriving by automobile. Access points should be located on collector roads or minor arterials and not on major arterials or on residential streets. Where feasible, a complete network of pedestrian pathways and bicycle lanes or routes should connect the station to all neighborhoods within a ¼-mile radius of the station.

Track Geometrics
Stations should be located on tangent sections of track where there is no super-elevation and good sight distance in either direction up and down the track from stations platforms.

Parking Spaces

Existing stations should be looked at on an individual basis and new parking added based on current occupancy rather than on a numeric standard for a number of spaces. Tri-Rail should adopt a 1,000-foot criterion for the maximum distance from the station platform to the most remote parking space.

Bus Bays
A minimum standard of two bus bays with priority bus stops is recommended as a minimum standard.

Kiss-Ride
The only kiss-ride criteria should be that some access continues to be provided at new stations, with preferential locations in relation to long-term parking. Circulation for buses, taxis, kiss-ride and parking should be segregated as much as practically possible within the station site.

Signage
Signage standards should be included in station location criteria. However, these standards should emerge from a dedicated signing study. One recommendation for the next major update of the TDP is to conduct a comprehensive way-finding and on-site signing study.

The full station location criteria study is provided in Technical Memo 3.8.

Existing Station Performance Assessment

Using the criteria created in the Station Location Criteria Study, each existing station was evaluated to identify deficiencies. Recommendations by station are as follows:

Mangonia Park - Bus shelters should be considered at bus bays. However, additional investment at the station should not be considered until such time as SFRTA attains long-term site control.

West Palm Beach – Pursue temporary and/or permanent parking facilities. Construct additional crosswalk(s) to access station from downtown. Bus shelters should be considered on sidewalk at bus stop locations.

Lake Worth - Add bus bays with shelters and drop off bays on Lake Worth Road with pedestrian crosswalk for access to station. Bus bays on Lake Worth Road are already approved as part of the I-95 parking restoration project.

Boynton Beach - There are no specific recommendations for this station resulting from this assessment.

Delray Beach - There are no specific recommendations for this station resulting from this assessment.

Boca Raton - There are no specific recommendations for this station resulting from this assessment.

Deerfield Beach **-** Bus shelters should be constructed at bus bays.

Pompano Beach - This station complies with all criteria but for potential pedestrian and signage issues.

Cypress Creek - There are no specific recommendations for this station resulting from this assessment.

Fort Lauderdale - Bus shelters should be constructed at bus stop locations.

Fort Lauderdale/Hollywood International Airport at Dania Beach - There are no specific recommendations for this station resulting from this assessment.

Sheridan Street - There are no specific recommendations for this station resulting from this assessment.

Hollywood - There are no recommendations to upgrade this station because of its close proximity to the Sheridan Street station where additional parking and bus facilities are available. Various proposals for a new station to the south could also help relieve this station's parking problems over the long term.

Golden Glades - There are no specific recommendations for this station resulting from this assessment.

Opa-Locka - There are no specific recommendations for this station resulting from this assessment.

Metrorail Transfer - Investigate the institutional partnerships necessary to conduct a feasibility study for an upgraded intermodal center at this station. The purpose of the study would be to investigate the costs and benefits of new investment to all stakeholders, including RTA.

Hialeah Market - There are no specific recommendations at this time for this station. However, its future should be evaluated in conjunction with any plans for double-tracking this section of track and/or improvements at Tri-Rail/Metrorail Transfer.

Miami International Airport - There are no specific recommendations for this station resulting from this assessment.

Additionally, non-vehicular access and signage issues occur at almost every station and should be addressed by system-wide improvements.

The full Existing Station Performance Assessment is provided in Technical Memo 3.9.

New Station Location Assessment

The proposed station location criteria suggest that there are several stretches of railroad where stations could be added. In addition, several new station locations have been proposed either by local developers or communities along the corridor. All these potential station locations were evaluated using the station location criteria to determine whether they should be considered in more detail for new stations.

There are four general locations where new stations have been proposed by various entities. These are:

- A replacement station to serve Palm Beach International Airport
- An second Boca Raton station
- A new station to serve the Isle Casino and Racing at Pompano Park
- A new station in the general vicinity of Hallandale Beach Boulevard.

Each station location was assessed using the station evaluation criteria, though some evaluation criteria, such as detailed ridership projections, were deemed unnecessary at this early evaluation point. The recommendations for each location are summarized as follows:

Palm Beach International Airport Station

Two sites near the airport were considered, one accessed by Australian Avenue (via Southern Boulevard), the other by Boyd Street (via Belvedere Road). Both sites satisfied the minimum spacing requirements. Both are at-grade crossings, while Boyd Street also provides recommended non-arterial access. Track geometrics may be a concern at the Boyd Street site, where the track curves on the southern side of the street. The Australian Avenue site does not have this problem. In summary, the evaluation recommends reconstruction of an airport station for Palm Beach International Airport. A study should be undertaken to evaluate and determine the best site and further define costs.

Glades Road/Military Trail, Boca Raton

Glades Road is an urban arterial and thus inappropriate as an access road. However, other criteria are generally satisfied at this site. The feasibility of a new station on the Glades Road/Military Trail site is heavily dependent upon the outcome of current and future land development and various funding options. Also, future dialogue with the City of Boca Raton is appropriate as its work on development of multimodal transit districts and other transit-oriented efforts evolve. It is advised to delay further decision on this site until the completion of these land development projects and further coordination with the city occurs.

The Isle Casino and Racing at Pompano Park

The Isle Casino and Racing at Pompano Park site is just south of Southwest 3rd Street, near W. Atlantic Boulevard in Pompano Beach. A station location was evaluated at a site on the south side of Race Track Road, adjacent to the Tri-Rail tracks. The close proximity of the Cypress Creek Station and the distance to the casino entrance complicate the viability of the station as currently envisioned. No funding nor land is currently available, so no further study is warranted at this time. A shuttle service from Cypress Creek would be a viable alternative. The proximity and accessibility issues would need to be solved if this proposal were to move forward.

Location to be Determined between Hollywood and Golden Glades

Potential sites accessed by Hallandale Beach Boulevard and Ives Dairy Road respectively, were evaluated. The Hallandale Beach Boulevard site did not satisfy the spacing or road access criteria, while Ives Dairy satisfied all criteria. However, the Ives Dairy Road site is public parkland, and thus may be unavailable for development. It is recommended that SFRTA investigate the status, boundaries, ownership, and funding for the Ives Dairy location before advancing to a feasibility study of a station at this location.

The full New Station Evaluation Assessment is provided in Technical Memo 3.10.

Chapter Four: Overview of Projects and Concepts

Relatively minor changes have been made to SFRTA's Five-Year Project Alternatives List since the publication of the SFRTA TDP FY 2007-11 Minor Update. The NW Scripps Extension project eliminated in last year's update has been removed from this year's table. Other project specifics have been updated or added to the line items shown below, with new projects shown in green.

The bulk of the chart shown below is the same as the Five Year Project Alternatives List submitted as part of last year's Minor Update. Columns displaying projects for FY 2006-07 remains, but is shaded in gray. In addition, a new fifth year (FY 2011-12) is included. Changes are noted and described in the far right column, labeled "Comment." A much more detailed and refined Five-Year Project Alternatives List will be developed in FY 07-08, as SFRTA will embark on its second major TDP update, covering the period FY 2009-13.

PROGRAMMED AND PROPOSED PROJECTS	**FY 06/07**	**FY 07/08**	**FY 08/09**	**FY 09/10**	**FY 10/11**	**FY 11/12**	**SFRTA Goal**	**Comment**
Operations								
Phase B Implementation (operations and management projects)	X	X	X				1,2	
Begin Operating 48/50 train Schedule	X						2,5	Completed. 50-train schedule implemented on June 4, 2007.
Additional Shuttle Service Between West Palm Beach and PBIA							2,5	All feeder/shuttle services are being examined and modified as appropriate after implementation of new 50-train schedule
Additional Shuttle Service From FAU/Boca Ration Community Hospital to Boca Raton Station		X					2,5	
Additional Service to Meet New Headways on Boca Center Shuttle							2,5	
Additional Shuttle Service and Merge Deerfield Routes 1&2 to Meet New Headways							2,5	
Additional Shuttle Service for West Palm Beach Routes to Meet New Headways							2,5	
Additional Shuttle Service To Meet New Headways at Cypress Creek							2,5	
Additional Shuttle Service to Meet New Headways on Ft. Lauderdale Airport Shuttle	X						2,5	
Additional Shuttle Service to Meet New Headways on the SF Education Center Bus							2,5	
Smart Card Ticket Integration		X	X	X			1,2,5	Procurement issues have delayed progress
Advanced Public Transportation Systems (Communications & Security/Safety)	X	X					2,5	

PROGRAMMED AND PROPOSED PROJECTS	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	SFRTA Goal	Comment
Automated On-board LEP Digital Messages/Info			X	X				Per recommendations from LEP Study
Maintenance								
Rehab and Overhaul Fleet	X						1	
North Storage and Crew Facilities			X	X	X		2	
Rolling Stock Spare Parts	X	X					1,2	
Hialeah Yard- Layover Facility	X						1,2	
Hialeah Yard- New Car Wash				X			2	Continued line item as unfunded in Regional Priorities List
Hialeah Yard- Layup Track Improvements	X	X					2	Continued line item as unfunded in Regional Priorities List
Capital								
Segment 5 - Double Tracking Project	X						2,5	Complete
Parking Improvements at Metrorail Transfer		X	X				2,5	
Metrorail Transfer East Platform Connection	X	X			X		2,5	Project identified for TRIP funding
Jupiter Extension			X	X	X		2,5	Also see line item in Planning section
New River Bridge	X						2	Complete
Upgrade Pompano Beach Station (new west parking lot)	X	X	X				1,2,5	Construct parking, bus facility and ITS elements as part of FDOT I-95 ITS effort.
Miscellaneous Access, Parking, and Circulation Improvements		X	X	X	X	X	2,5	Overrides station and access improvements mentioned in prior TDPs. See Appendix for specific recommendations
West Palm Beach Intermodal Facility Parking			X	X			2,5	
Acquire Cab Cars and Coaches	X	X			X		2	FY 06-07 (TRIP funds) encumbered in FY 07-08
Smart Card Ticket Vending Machines		X	X	X				Procurement delays
Miami River Area Double-Tracking			X	X	X			Engineering and Design

PROGRAMMED AND PROPOSED PROJECTS	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	SFRTA Goal	Comment
Planning and Engineering								
Central Palm Beach County Transportation Corridor Study	X						2,5	Substantially complete
SFRTA Strategic Regional Transit Plan	X	X					2,3	In progress
Tri-Rail Station Parking and Circulation Study	X						2,3,5, 7	Substantially complete
TDP Major Update, FY 2008-13	X	X					3,4	Minor Update substantially complete. Major update to commence Fall 2007
Transit Oriented Development Studies		X	X	X	X	X	2,3,6	
Palm Beach International Airport Station Feasibility Study		X	X	X			2,3,6	Planning and Design
Signage & Wayfinding Study		X	X				3,5	Study
Hallandale/Ives Dairy Road Station Feasibility Study				X	X		1,2,5	Study
West Palm Beach Station Temporary Parking Design		X						Engineering
Additional Equipment Storage Location		X	X	X				Planning, Design, Construction
Pocket Tracks and Siding		X	X	X				Planning, Design, Construction
Miami River Area Double-Track Feasibility Study		X	X	X				Study
System-wide Pedestrian, Bicycle and Amenity Improvements		X	X	X	X	X	5	Planning and Design
Tri-Rail/Metrorail Multi-modal center feasibility study			X				1,2,3, 5,6,7	Study
Fort Lauderdale Circulation Improvements				X			2,5	Planning and Design
Deerfield Beach Circulation Improvements					X		2,5	Planning and Design
Fort Lauderdale/Hollywood Airport Parking Lot Expansion			X					Engineering
Boynton Beach Circulation Improvements						X	2,5	Planning and Design
Tri-Rail Station Improvement Inventory		X						Engineering
Performance Measures	X							Substantially complete

Chapter Five: Fiscal Plan

A major requirement of the TDP process is to submit an updated financial plan. Last year's Minor TDP Update contained a financial plan outlining SFRTA's capital budget and operating budget for FY 2005-06, and five year projections for capital and operating revenues/expenditures through FY 2010-11. This chapter of the TDP Minor Update includes the SFRTA capital budget and operating budget for FY 2006-07, and five year projections for capital and operating revenues/expenditures through FY 2011-12.

Table 5-1

SFRTA BUDGET SUMMARY	
Capital Budget	$141,161,500
Operating Budget	$58,588,170
Total	**$199,749,670**

The total SFRTA budget for FY 2006-07 was slightly under $200 million, approximately 3% larger than the FY 2005-06 budget of $194 million.

The following tables provide the SFRTA capital revenue and expenses for FY 2006-07.

Table 5-2

CAPITAL REVENUE			
	CARRYOVER	**FY 2006-07 BUDGET**	**FY 2006-07 TOTAL**
FTA Section 5307 - Formula Funds	$32,094,300	$8,404,000	$40,498,300
FTA Section 5309 - Rail Mod.	3,507,500	7,725,000	11,232,500
FTA Section 5309 – SAFETEA	4,235,700	3,570,000	7,805,700
FTA Section 5309-New Starts (Seg 5)	220,400		220,400
CMAQ (Smart Card)	285,900		285,900
FHWA – Broward STP Funds (Seg 5)	0	3,375,000	3,375,000
FHWA - Palm Beach STP Funds (Seg 5)	0	4,500,000	4,500,000
Florida Dept. of Community Affairs	1,132,200		1,132,200
FDOT JPA 42: New River	14,900,000		14,900,000
FDOT JPA 42: Segment 5	16,800,000	2,625,000	19,425,000
FDOT JPA 55: DMU	5,008,000		5,008,000
FDOT JPA 57: Pompano Station Parking	450,000		450,000
FDOT JPA 58: Sheridan Park & Ride	28,500		28,500
Hertz Settlement:	260,000		260,000
County Capital Contribution	24,030,000	8,010,000	32,040,000
TOTAL CAPITAL REVENUES	**$102,952,500**	**$38,209,000**	**$141,161,500**

Table 5-3

CAPITAL EXPENSES

	CARRYOVER	FY 2006-07 BUDGET	FY 2006-07 TOTAL
Double Tracking Project			
New River Bridge - Design/Build	$14,900,000		$14,900,000
Segment 5 - FFGA	27,670,000	10,500,000	38,170,000
Administration Building	3,267,100	3,570,000	6,837,100
Ticket Vending Machines	3,837,800	2,000,000	5,837,800
Smart Cards	1,667,700		1,667,700
DMU Rail Car Purchase	5,008,000		5,008,000
Rolling Stock			
Coach Overhaul/Rehab	1,628,500	1,900,000	3,528,500
Spare Parts/Components	1,804,000		1,804,000
Other Engineering Projects			
Pompano Beach Parking	450,000		450,000
GEC		200,000	200,000
Sheridan St Park & Ride	28,500		28,500
Golden Glades	418,000		418,000
Project Planning/Studies			
Planning & Program Support	1,809,500	1,200,000	3,009,500
FEC long rang plan	6,020,000		6,020,000
FEC Segment 1-Jupiter	1,257,700		1,257,700
FEC Segment 2-PE/EA	697,100		697,100
SCRIPPS Feasibility Study	174,200		174,200
Okeechobee Bus Route	52,200		52,200
Other Planning Projects	2,940,700	2,218,000	5,158,700
Planning Assistance	150,000		150,000
TOD-Joint Development	250,000		250,000
Transit Development Plan-Phase 2	400,000		400,000
Transportation/Land Use Planning	450,000		450,000
Regional Long Range Plan	650,000		650,000
West Palm Beach Intermodal	453,400		453,400
Miscellaneous Operations Dept. Projects			
Hialeah Yard Projects	500,000	650,000	1,150,000
Hialeah Yard Generator	100,000		100,000
Misc. Station Rehabilitation		335,000	335,000
Bus Pads	136,000		136,000
Irrigation Wells	60,000		60,000
On-Board GeoFocus	199,000		199,000
ADA Improvements	25,000	575,000	600,000
Office/Computer Equipment	475,900	300,000	775,900
Urban Area Security Initiatives	1,132,200		1,132,200
Lease Hold Improvements	250,000		250,000
Autos	60,000		60,000
Preventive Maintenance/Station Maint.	0	6,751,000	6,751,000
Regional Projects	24,030,000	8,010,000	32,040,000
TOTAL CAPITAL EXPENDITURES	**$102,952,500**	**$38,209,000**	**$141,161,500**

Capital budget is the vast majority of the overall budget. For FY 2006-07, the capital budget is balanced at $141 million in revenues and expenses. However, this fiscal year's capital budget is 10% lower than the FY 2005-06 total of $155 million.

Tables 4-4 and 4-5 below present the FY 2006-07 operating budget.

The FY 2006-07 SFRTA operating budget was balanced at $58.6 million in revenues and expenses, $20 million more than FY 2005-06. FY 2005-06 revenues are comprised of $8.0 million in train revenues (compared to $6.8 million in FY 2005-06) and $50.6 million in operating assistance (compared to $31.7 million in FY 2005-06). Operations accounted for nearly $39 million in FY 2006-07, an increase of 50% over FY 2005-06. This sizable increase is due in part to the addition of 10 weekday trains which reduce peak-hour headways to 20 minutes. There were also $2 million increases in train fuel and personnel expenses.

Table 5-4

OPERATIONAL REVENUES	
	FY 2006-2007 BUDGET
TRAIN REVENUE	
Train Service Revenue	$7,880,853
Interest Income/Other Income	150,000
Total Train Revenue	8,030,853
OPERATING ASSISTANCE	
FTA Planning Grant	1,150,283
FTA Preventive Maintenance	12,277,965
FHWA	4,000,000
FDOT Operating Assistance	13,100,850
FDOT Contracted Dispatch Service	3,062,977
FDOT Feeder Service Pass Through	2,953,129
FDOT Feeder Service Pt. Everglades	156,780
FDOT DMU Funding	
Miami-Dade Operating Assistance	4,366,950
Broward Operating Assistance	4,366,950
Palm Beach Operating Assistance	4,366,950
Broward County Feeder Subsidy	624,483
Other Local Funding	100,000
TOTAL ASSISTANCE	**50,527,317**
TOTAL REVENUE	**$58,588,170**

Table 5-5

CAPITAL EXPENSES	
APPROPRIATIONS	**FY 2006-2007 BUDGET**
Operations	$38,850,893
Personnel Expense	9,365,019
Train Fuel Contract	5,559,047
General & Administrative	2,279,139
Marketing	1,022,072
Professional Fees	1,382,000
Reserve	500,000
Expenditures Transferred to Capital Budget	(400,000)
TOTAL APPROPRIATIONS	**$58,558,170**

Five year projections for both the capital and operating budgets have been completed as part of previous SFRTA budgeting exercises, and are included below as a component of the

TDP Minor Update financial plan. Table 5-6 on the following page contains capital revenue projections for the period FY 2006-07 through FY 2011-12. The five-year plan highlights a drop in projected revenue after FY 2008-09. This is due primarily to FTA Section 5309-Safetea and County Capital Contribution funds both ending. These losses in revenue are offset by expiring expenditures such as the double-tracking project and miscellaneous regional projects, as is shown in Table 5-7.

Table 5-8 provides operating budget projections for the period FY 2006-07 through FY 2011-12. The five-year plan projects increased fare-generated revenue which supplements slight increases in county and state funding. Operational revenue increases are offset by small increases in the projected yearly operating budget.

Table 5-6

FY 2006-07 CAPITAL BUDGET & 5 YEAR PLAN

REVENUE

		5-YEAR PLAN					
	FY 2006-07 TOTAL	FY 2007-08 BUDGET	FY 2008-09 BUDGET	FY 2009-10 BUDGET	FY 2010-11 BUDGET	FY 2011-12 BUDGET	TOTAL
FTA Section 5307 - Formula Funds	$40,498,300	$8,656,000	$8,915,000	$9,183,000	$9,459,000	$9,700,000	$86,411,300
Segment 5	7,248,000						7,248,000
TVM Project	3,837,800						3,837,800
Smart Card	224,400						224,400
Rolling Stock	4,562,000	2,385,000	4,240,000	3,883,000	3,384,000	3,500,000	21,954,000
Administration Building	1,382,700						1,382,700
Program Support	3,009,500	1,200,000	1,600,000	1,800,000	2,000,000	2,200,000	11,809,500
Planning Consultants	9,239,900	2,321,000	2,600,000	2,900,000	3,200,000	3,500,000	23,760,900
FEC Study	6,020,000						6,020,000
Engineering Consultants	200,000						200,000
Preventive Maintenance	1,326,000	500,000					1,826,000
Misc. Operation/Hialeah Projects	2,580,000	1,250,000	400,000	550,000	500,000	500,000	5,780,000
Autos	60,000		75,000		75,000		210,000
Station Rehabilitations	0	1,000,000					1,000,000
Leasehold Improvements	250,000						250,000
Computers/Office Equipment	400,000			50,000	300,000		750,000
Golden Glades	158,000						158,000
FTA Section 5309 - Rail Mod.	11,232,500	7,957,000	8,195,000	8,441,000	8,695,000	8,955,000	53,475,500
Administration Building	1,884,400						1,884,400
ADA Improvements				100,000			100,000
Smart Card	776,700						776,700
Preventive Maintenance	5,425,000	4,407,000	6,645,000	7,391,000	7,195,000	7,200,000	38,263,000
Station Rehabilitations	0	300,000	500,000	500,000	600,000	700,000	2,600,000
Engineering Consultants			300,000	400,000	500,000	600,000	1,800,000
Rolling Stock	770,500				400,000	355,000	1,525,500
TVM Project	2,000,000	3,200,000	700,000				5,900,000
Computers/Office Equipment	375,900	50,000	50,000	50,000		100,000	625,900
FTA Section 5309 - Safetea	7,805,700	3,880,000	4,114,000				15,799,700
FTA Section 5309-New Starts (Seg 5)	220,400						220,400
CMAQ (Smart Card)	285,900						285,900
FHWA - Broward STP Funds (Seg 5)	3,375,000						3,375,000
FHWA - Palm Beach STP Funds (Seg 5)	4,500,000						4,500,000
Florida Dept. of Community Affairs	1,132,200						1,132,200
Palm Beach County MPO	0		1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
FDOT JPA 42: New River	14,900,000						14,900,000
FDOT JPA 42: Segment 5	19,425,000						19,425,000
FDOT JPA 55: DMU	5,008,000						5,008,000
FDOT JPA 57: Pompano Station Parking	450,000						450,000
FDOT JPA 58: Sheridan Street Park & Ride	28,500						28,500
Hertz Settlement:	260,000						260,000
County Capital Contribution	32,040,000	8,010,000	8,010,000				48,060,000
Total Capital Revenues	$141,161,500	$28,503,000	$30,734,000	$19,124,000	$19,654,000	$20,155,000	$259,331,500

(1) FY 2006-07 Totals include carryover

Table 5-7

FY 2006-07 CAPITAL BUDGET & 5 YEAR PLAN
EXPENSES

		5-Year Plan					
	FY 2006-07 TOTALS	FY 2007-08 BUDGET	FY 2008-09 BUDGET	FY 2009-10 BUDGET	FY 2010-11 BUDGET	FY 2011-12 BUDGET	TOTAL
Double Tracking Project							
New River Bridge - Design/Build	$14,900,000						$14,900,000
Segment 5 - FFGA	38,170,000						38,170,000
Administration Building	6,837,100	3,880,000	1,195,000				11,912,100
Ticket Vending Machines	5,837,800	3,200,000	3,619,000				12,656,800
Smart Cards	1,667,700						1,667,700
DMU Rail Car Purchase	5,008,000						5,008,000
Rolling Stock							
Rolling Stock		2,385,000	3,340,000	3,083,000	2,984,000	2,855,000	14,647,000
Coach Overhaul/Rehab	3,528,500						3,528,500
Spare Parts/Components	1,804,000		900,000	800,000	800,000	1,000,000	5,304,000
Engineering Projects							
Pompano Beach Parking	450,000						450,000
Pompano Beach Canopy		1,000,000					1,000,000
GEC	200,000	300,000	300,000	400,000	500,000	600,000	2,300,000
Sheridan St Part & Ride	28,500						28,500
Golden Glades	418,000						418,000
Project Planning/Studies							
Planning & Program Support	3,009,500	1,200,000	1,600,000	1,800,000	2,000,000	2,200,000	11,809,500
FEC long range plan	6,020,000						6,020,000
FEC Segment 1-Jupiter	1,257,700						1,257,700
FEC Segment 2-PE/EA	697,100						697,100
SCRIPPS Feasibility Study	174,200						174,200
Okeechobee Bus Route	52,200						52,200
Other Planning Projects	5,158,700	2,321,000	2,600,000	2,900,000	3,200,000	3,500,000	19,679,700
Planning Assistance	150,000						150,000
TOD-Joint Development	250,000						250,000
Transit Development Plan-Phase 2	400,000						400,000
Transportation/Land Use Planning	450,000						450,000
Regional Long Range Plan	650,000						650,000
West Palm Beach Intermodal	453,400						453,400
Misc. Operations Dept. Projects							
Hialeah Yard Projects	1,150,000	1,250,000	400,000	550,000	500,000	500,000	4,350,000
Hialeah Yard Generator	100,000						100,000
Misc. Station Rehabilitation	335,000		500,000	500,000	600,000	700,000	2,635,000
Bus Pads	136,000						136,000
Irrigation Wells	60,000						60,000
On-Board GeoFocus	199,000						199,000
ADA Improvements	600,000			100,000			700,000
Jupiter Corridor			1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
Office/Computer Equipment	775,900	50,000	50,000	100,000	300,000	100,000	1,375,900
Urban Area Security Initiatives	1,132,200						1,132,200
Lease Hold Improvements	250,000						250,000
Autos	60,000		75,000		75,000		210,000
Preventive Maintenance	6,751,000	4,907,000	6,645,000	7,391,000	7,195,000	7,200,000	40,089,000
Regional Projects	32,040,000	8,010,000	8,010,000				48,060,000
Total Capital Expenditures	$141,161,500	$28,503,000	$30,734,000	$19,124,000	$19,654,000	$20,155,000	$259,331,500

(1) FY 2006-07 Totals include carryover

Table 5-8

FY 2006-2007 OPERATING BUDGET AND 5 YEAR PLAN

		Five Year Fiscal Year Projections				
	FY 2006-07 Budget	2007-08	2008-09	2009-10	2010-11	2011-2012
Operating Projections						
Passenger Fare & Other Revenue						
Passenger Revenue	$6,699,974	$7,168,972	$7,670,800	$8,207,756	$8,782,299	$9,397,060
Other Revenue	300,000	310,000	319,300	328,879	338,745	348,908
Total Passenger Fare & Other Revenue	$6,999,974	$7,478,972	$7,990,100	$8,536,635	$9,121,045	$9,745,968
State & County Revenue						
FDOT - Operating JPA	$12,477,000	$13,100,850	$13,755,893	$14,443,687	$15,165,871	$15,924,165
FDOT - DMU JPA	1,100,000	0	0	0	0	0
FDOT - Marketing JPA	0	0	0	0	0	0
FDOT - Feeder Service JPA	2,662,774	2,822,540	2,000,000	2,000,000	2,000,000	2,000,000
Federal Highway Administration	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Federal Transit Administration	6,750,843	7,223,402	7,729,040	8,270,073	8,848,978	9,468,407
FTA Program Support	1,225,575	1,286,854	1,351,196	1,418,756	1,489,694	1,564,179
Miami-Dade County Operating Assistance	4,159,000	4,366,950	4,585,298	4,814,562	5,055,290	5,308,055
Broward County Operating Assistance	4,159,000	4,366,950	4,585,298	4,814,562	5,055,290	5,308,055
Palm Beach County Operating Assistance	4,159,000	4,366,950	4,585,298	4,814,562	5,055,290	5,308,055
Broward County Feeder Service Subsidy	606,294	624,483	643,217	662,514	682,389	702,861
Other Local Funding (1)	100,000	100,000	100,000	100,000	100,000	100,000
Total State & County Revenue	$41,399,486	$42,258,979	$43,335,239	$45,338,718	$47,452,802	$49,683,777
Total Operating Revenue	$48,399,460	$49,737,951	$51,325,339	$53,875,353	$56,573,847	$59,429,745
Operating & Maintenance Costs						
Base Line Operating & Maintenance Costs	$45,495,480	$46,405,390	$47,333,497	$48,990,170	$49,343,133	$50,916,104
Costs of Additional Service	2,903,980	3,332,561	4,983,735	6,056,589	7,230,714	8,513,641
Total Operating & Maintenance Costs	$48,399,460	$49,737,951	$52,317,232	$55,046,759	$56,573,847	$59,429,745

(1) Other Local Funding consists of funds provide for feeder services by cities such as Boca Raton

Regionally-Dedicated Revenue

Dedicated funding has been sought by SFRTA for several years. In 2003, after being approached by government leaders in South Florida, the Legislature created the SFRTA and gave Broward, Palm Beach and Miami-Dade counties the ability by referendum to impose a two dollar fee on license tags to help finance the authority, the first of its kind in Florida.

The creation of the SFRTA was widely hailed as an innovative move to help South Florida tap into federal dollars that would otherwise go to projects in other metropolitan areas of the country. However, the initiative to include the fee on license tags drew opposition from many business leaders and others who had insisted that such a tax be implemented only if approved by voters. The funding proposal did not gain approval from the Legislature.

In 2004 and 2005, SFRTA expanded the potential funding sources that the Legislature could consider. Some of the funding sources, such as a $100 fee on new car purchases, would not yield sufficient funding but were still considered in the possible array of sources to propose to the Legislature. Ultimately, the SFRTA Governing Board selected the $2-per-day rental car surcharge as the funding source and SFRTA assisted in drafting the legislation. The legislation was passed by both houses of the Legislature but was vetoed by the Governor in June 2006 and therefore never made it onto the ballot of the counties.

For the 2006/07 legislative session, SFRTA's Governing Board approved the agency's State Legislative Initiatives which included (a) the request for dedicated funding of at least $50 million annually, and (b) a request for support from all three counties. The funding request was kept general – no specific source was identified in the legislative packets developed by the agency. SFRTA also made presentations to its transportation partners and business leaders in South Florida and later assisted in preparing draft legislative bill language.

Possible dedicated funding sources included a one-time title fee on vehicles, an annual registration fee on vehicles, a surcharge on rental cars and a gas tax. The possible sources were outlined as follows:

Possible sources

1.	Title Fee (one-time) New Vehicles	$130
2.	Title Fee (one-time) 1997 and newer	$60
3.	Title Fee (one-time) All vehicles	$40
4.	Registration Fee (annual)	$15
5.	Rental Car Surcharge (daily)	$2
6.	Gas Tax	$0.02

SFRTA returned to the Florida Legislature and requested support for a dedicated funding source; however, no supporting legislation was sponsored.

Other Potential Revenue Sources

Dedicated funding has added benefit beyond revenue stability. With dedicated funding, SFRTA projects would become eligible for new Federal funds, and would receive increased priority for State funding programs. Those Federal and State programs most appropriate for SFRTA are as follows:

- FDOT/Strategic Intermodal System (SIS) – SIS was created in 2005. Administered by FDOT, SIS funds projects on the SIS and Emerging networks. The South Florida Rail Corridor on which Tri-Rail operates is part of the SIS network. SFRTA is pursuing SIS funding assistance to help cover capital project expenses in the corridor. The SFRTA Governing Board has indicated their desire to see more SIS (statewide) funds flow to Tri-Rail, which have been limited to date.

- FDOT/Transportation Regional Incentive Program (TRIP) – This program, like SIS, was created by the 2005 Legislature and administered by FDOT. TRIP funds are State funds that are available throughout Florida to provide incentives for local governments and the private sector to help pay for critically needed projects that benefit regional travel and commerce. SFRTA is working with the Southeast Florida Transportation Council's (SEFTC) Regional Transportation Technical Advisory Committee (RTTAC) to prioritize regional projects eligible to receive TRIP funding. There has been good success to date, including the funding of a major capital purchase of rolling stock.

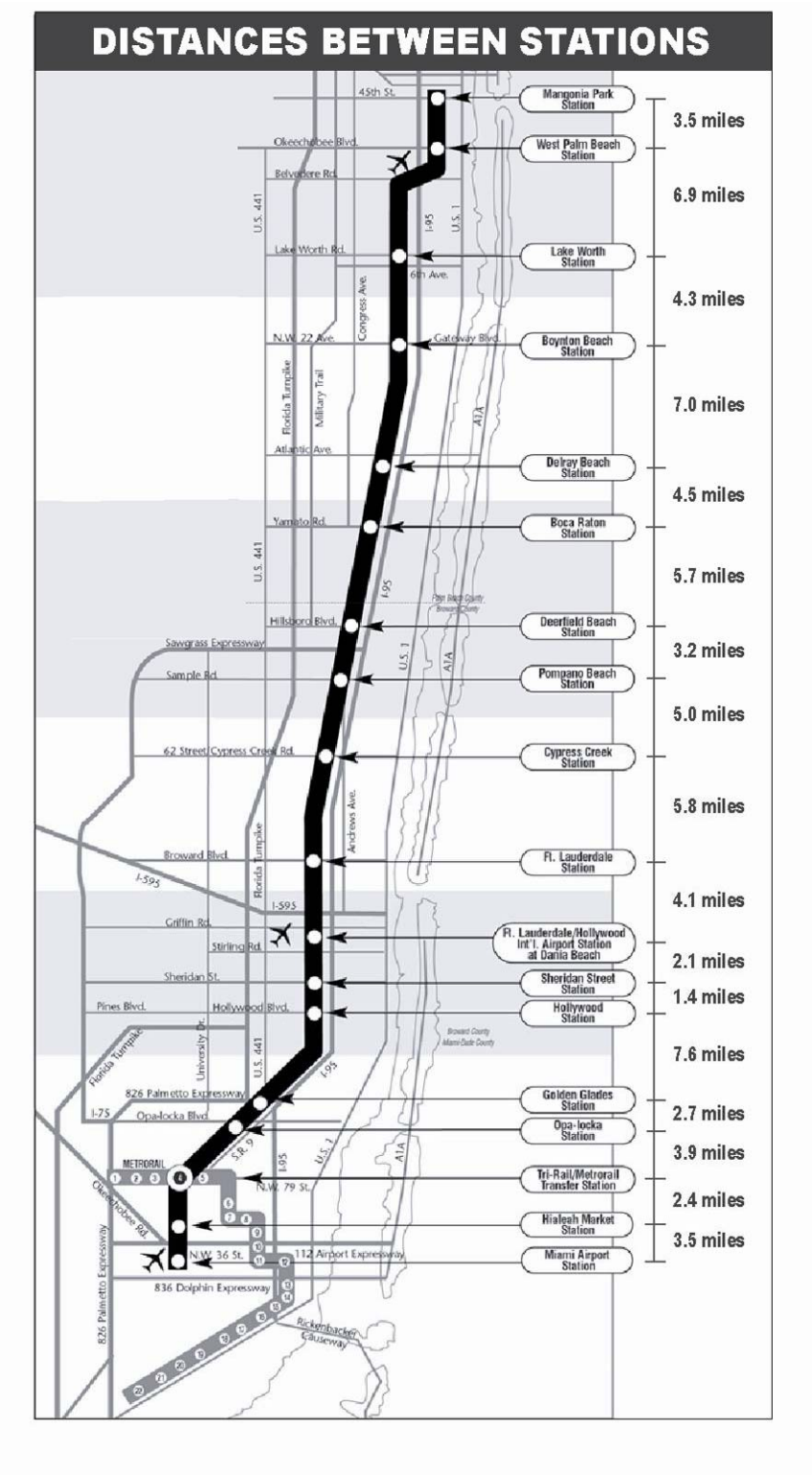
- FDOT/State Infrastructure Bank (SIB) – SIB is a revolving loan program administered by FDOT. SIB loans may be applied to fund projects on or linked to the State Highway System. In FY2003/04, $10 million of SIB funding was used in FDOT District 4 to assist in the funding of the double-tracking project. SFRTA can continue to monitor SIB funding as a potential revenue source, although the State SIB is already near or at capacity for available revenue.

- SFRTA/Public-Private Joint Ventures – Transit-oriented joint development can be accomplished through a sale or lease of federally-funded property, or through direct participation of the transit agency in the development - as a general partner for instance - depending upon the needs of the project. If a joint development project produces income for the transit system, it can be used by the agency for eligible transit purposes. The only restriction placed on such arrangements is that the transit system must retain effective continuing control of the joint development for transit purposes. In other words, the property being used for joint development could be sold for this purpose to the developer, but the transit grantee must retain some assurance that the joint development will remain accessible to the transit system during the life of the project. As long as such assurances can be maintained, the transit agency may retain all revenues from such joint development as program income. As a potential revenue source, transit-oriented joint development on Tri-Rail's 72-mile corridor holds significant funding possibilities, but SFRTA has had limited success to date.

- Advertising – This is a modest but important source of funding for many transit services. The largest portion of this potential is for exterior advertising, rather than interior "bus card-type" advertising. The potential funds generated by advertising placed within the vehicles are comparatively low. Much of SFRTA's current advertising space is utilized for safety and public service-related announcements and notices. There is some opportunity to expand the use of advertising as a revenue source both on-board the trains and feeder buses and in station areas and platforms.

Appendix

Figure 7 System Map- Distances Between Tri-Rail Stations



Level of Service Measures

1. Span of service revenue service

LOS	Hours of Service	Comments
A	19-24	Night or "owl" service provided
B	17-18	Late evening service provided
C	14-16	Early evening service provided
D	12-13	Daytime service provided
E	4-11	Peak hour service only or limited midday service
F	0-3	Very limited or no service

2. frequency

LOS	Avg. Headway (min)	veh/h	Comments
A	<10	>6	Passengers do not need schedules
B	10-14	5-6	Frequent service, passengers consult schedules
C	15-20	3-4	Maximum desirable time to wait if bus/train missed
D	21-30	2	Service unattractive to choice riders
E	31-60	1	Service available during the hour
F	>60	<1	Service unattractive to all riders

3. on-time performance

LOS	On-Time Percentage	Comments*
A	95.0-100.0%	1 late transit vehicle every 2 weeks (no transfer)
B	90.0-94.9%	1 late transit vehicle every week (no transfer)
C	85.0-89.9%	3 late transit vehicles every 2 weeks (no transfer)
D	80.0-84.9%	2 late transit vehicles every week (no transfer)
E	75.0-79.9%	1 late transit vehicle every day (with a transfer)
F	<75.0%	1 late transit vehicle at least daily (with a transfer)

NOTE: Applies to routes with a published timetable, particularly to those with headways longer than 10 minutes. "On-time" is 0 to 5 minutes late, and can be applied to either arrivals or departures, as appropriate for the situation being measured. Early departures are considered on-time only in locations where no passengers would typically board (e.g., toward the end of a route).

*Individual's perspective, based on 5 round trips per week.

4. Service coverage

LOS	% TSA Covered	Comments
A	90.0-100.0%	Virtually all major origins & destinations served
B	80.0-89.9%	Most major origins & destinations served
C	70.0-79.9%	About ¾ of higher-density areas served
D	60.0-69.9%	About two-thirds of higher-density areas served
E	50.0-59.9%	At least ½ of the higher-density areas served
F	<50.0%	Less than ½ of higher-density areas served

Transit-Supportive Area (TSA): The portion of the area being analyzed that has a household density of at least 3 units per gross acre (7.5 units per gross hectare) or an employment density of at least 4 jobs per gross acre (10 jobs per gross hectare).

Covered Area: The area within 0.25 mile (400 m) of local bus service or 0.5 mile (800 m) of a busway or rail station, where pedestrian connections to transit are available from the surrounding area.

5. Auto v. Rail Travel time difference

LOS	Travel Time Difference (min)	Comments
A	≤0	Faster by transit than by automobile
B	1-15	About as fast by transit as by automobile
C	16-30	Tolerable for choice riders
D	31-45	Round-trip at least an hour longer by transit
E	46-60	Tedious for all riders; may be best possible in small cities
F	>60	Unacceptable to most riders

Tri-Rail Service Schedule Effective 6/4/07 – Weekdays

NORTHBOUND TO MANGONIA PARK STATION												
STATION	**WEEKDAY A.M.**											
Train Number	P600	P602	P604	P606	P608	P610	P612	P614	P616	P618	P620	P622
Miami Airport	4:20	4:50	5:20	5:50	6:10	6:30	7:00	7:30	8:10	9:00	10:00	11:00
Hialeah Market	4:23	4:53	5:23	5:53	6:13	6:33	7:03	7:33	8:13	9:03	10:03	11:03
Metrorail Transfer	4:27	4:57	5:27	5:57	6:17	6:37	7:07	7:37	8:17	9:07	10:07	11:07
Opa-locka	4:33	5:03	5:33	6:03	6:23	6:43	7:13	7:43	8:23	9:13	10:13	11:13
Golden Glades	4:38	5:08	5:38	6:08	6:28	6:48	7:18	7:48	8:28	9:18	10:18	11:18
Hollywood	4:46	5:16	5:46	6:16	6:36	6:56	7:26	7:56	8:36	9:26	10:26	11:26
Sheridan Street	4:49	5:19	5:49	6:19	6:39	6:59	7:29	7:59	8:39	9:29	10:29	11:29
Fort Lauderdale/Hollywood International Airport at Dania Beach	4:52	5:22	5:52	6:22	6:42	7:02	7:32	8:02	8:42	9:32	10:32	11:32
Fort Lauderdale	5:00	5:30	6:00	6:30	6:50	7:10	7:40	8:10	8:50	9:40	10:40	11:40
Cypress Creek	5:06	5:36	6:06	6:36	6:56	7:16	7:46	8:16	8:56	9:46	10:46	11:46
Pompano Beach	5:12	5:42	6:12	6:42	7:02	7:22	7:52	8:22	9:02	9:52	10:52	11:52
Deerfield Beach	5:17	5:47	6:17	6:47	7:07	7:27	7:57	8:27	9:07	9:57	10:57	11:57
Boca Raton	5:24	5:54	6:24	6:54	7:14	7:34	8:04	8:34	9:14	10:04	11:04	12:04
Delray Beach	5:29	5:59	6:29	6:59	7:19	7:39	8:09	8:39	9:19	10:09	11:09	12:09
Boynton Beach	5:37	6:07	6:37	7:07	7:27	7:47	8:17	8:47	9:27	10:17	11:17	12:17
Lake Worth	5:43	6:13	6:43	7:13	7:33	7:53	8:23	8:53	9:33	10:23	11:23	12:23
West Palm Beach	5:54	6:24	6:54	7:24	7:44	8:04	8:34	9:04	9:44	10:34	11:34	12:34
Mangonia Park	6:05	6:35	7:05	7:35	7:55	8:15	8:45	9:15	9:55	10:45	11:45	12:45

NORTHBOUND TO MANGONIA PARK STATION													
STATION	**WEEKDAY P.M.**												
Train Number	P624	P626	P628	P630	P632	P634	P636	P638	P640	P642	P644	P646	P648
Miami Airport	12:00	1:00	2:00	3:00	4:00	4:30	5:00	5:20	5:50	6:20	6:50	7:50	9:20
Hialeah Market	12:03	1:03	2:03	3:03	4:03	4:33	5:03	5:23	5:53	6:23	6:53	7:53	9:23
Metrorail Transfer	12:07	1:07	2:07	3:07	4:07	4:37	5:07	5:27	5:57	6:27	6:57	7:57	9:27
Opa-locka	12:13	1:13	2:13	3:13	4:13	4:43	5:13	5:33	6:03	6:33	7:03	8:03	9:33
Golden Glades	12:18	1:18	2:18	3:18	4:18	4:48	5:18	5:36	6:08	6:38	7:08	8:08	9:38
Hollywood	12:26	1:26	2:26	3:26	4:26	4:56	5:26	5:46	6:16	6:46	7:16	8:16	9:46
Sheridan Street	12:29	1:29	2:29	3:29	4:29	4:59	5:29	5:49	6;19	6:49	7:19	8:19	9:49
Fort Lauderdale/Hollywood International Airport at Dania Beach	12:32	1:32	2:32	3:32	4:32	5:02	5:32	5:52	6:22	6:52	7:22	8:22	9:52
Fort Lauderdale	12:40	1;40	2:40	3:40	4:40	5:10	5:40	6:00	6:30	7:00	7:30	8:30	10:00
Cypress Creek	12:46	1:46	2:46	3:46	4:46	5:16	5:46	6:06	6:36	7:06	7:36	8:36	10:06
Pompano Beach	12:52	1:52	2:52	3:52	4:52	5:22	5:52	6:12	6:42	7:12	7:42	8:42	10:12
Deerfield Beach	12:57	1:57	2:57	3:57	4:57	5:27	5:57	6:17	6:47	7:17	7:47	8:47	10:17
Boca Raton	1:04	2:04	3:04	4:04	5:04	5:34	6:04	6:24	6:54	7:24	7:54	8:54	10:24
Delray Beach	1:09	2:09	3:09	4:09	5:09	5:39	6:09	6:29	6:59	7:29	7:59	8:59	10:29
Boynton Beach	1:17	2:17	3;17	4:17	5:17	5:47	6:17	6:37	7:07	7:37	8:07	9:07	10:37
Lake Worth	1:23	2:23	3:23	4:23	5:23	5:53	6:23	6:43	7:13	7:43	8:13	9:13	10:43
West Palm Beach	1:34	2:34	3:34	4:34	5:34	6:04	6:34	6:54	7:24	7:54	8:24	9:24	10:54
Mangonia Park	1:45	2:45	3:45	4:45	5:45	6:15	6:45	7:05	7:35	8:05	8:35	9:35	11:05

SOUTHBOUND TO MIAMI AIRPORT STATION												
STATION	**WEEKDAY A.M.**											
Train Number	P601	P603	P605	P607	P609	P611	P613	P615	P617	P619	P621	P623
Mangonia Park	4:00	4:40	5:30	6:00	6:20	6:40	7:00	7:30	8:00	9:00	10:00	11:00
West Palm Beach	4:06	4:46	5:36	6:06	6:26	6:46	7:06	7:36	8:06	9:06	10:06	11:06
Lake Worth	4:14	4:54	5:44	6:14	6:34	6:54	7:14	7:44	8:14	9:14	10:14	11:14
Boynton Beach	4:19	4:59	5:49	6:19	6:39	6:59	7:19	7:49	8:19	9:19	10:19	11:19
Delray Beach	4:27	5:07	5:57	6:27	6:47	7:07	7:27	7:57	8:27	9:27	10:27	11:27
Boca Raton	4:32	5:12	6:02	6:32	6:52	7:12	7:32	8:02	8:32	9:32	10:32	11:32
Deerfield Beach	4:39	5:19	6:09	6:39	6:59	7:19	7:39	8:09	8:39	9:39	10:39	11:39
Pompano Beach	4:43	5:23	6:13	6:43	7:03	7:23	7:43	8:13	8:43	9:43	10:43	11:43
Cypress Creek	4:49	5:29	6:19	6:49	7:09	7:29	7:49	8:19	8:49	9:49	10:49	11:49
Fort Lauderdale	4:56	5:36	6:26	6:56	7:16	7:36	7:56	8:26	8:56	9:56	10:56	11:56
Fort Lauderdale/Hollywood International Airport at Dania Beach	5:03	5:43	6:33	7:03	7:23	7:43	8:03	8:33	9:03	10:03	11:03	12:03
Sheridan Street	5:07	5:47	6:37	7:07	7:27	7:47	8:07	8:37	9:07	10:07	11:07	12:17
Hollywood	5:11	5:51	6:41	7:11	7:31	7:51	8:11	8:41	9:11	10:11	11:11	12:11
Golden Glades	5:20	6:00	6:50	7:20	7:40	8:00	8:20	8:50	9:20	10:20	11:20	12:20
Opa-locka	5:26	6:06	6:56	7:26	7:46	8:06	8:26	8:56	9:26	10:26	11:26	12:26
Metrorail Transfer	5:33	6:13	7:03	7:33	7:53	8:13	8:33	9:03	9:33	10:33	11:33	12:33
Hialeah Market	5:39	6:19	7:09	7:39	7:59	8:19	8:39	9:09	9:39	10:39	11:39	12:39
Miami Airport	5:45	6:25	7:15	7:45	8:05	8:25	8:45	9:15	9:45	10:45	11:45	12:45

SOUTHBOUND TO MIAMI AIRPORT STATION													
STATION	**WEEKDAY P.M.**												
Train Number	P625	P627	P629	P631	P633	P635	P637	P639	P641	P643	P645	P647	P649
Mangonia Park	12:00	1:00	2:00	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:40	7:40	8:40
West Palm Beach	12:06	1:06	2:06	3:06	3:36	4:06	4:36	5:06	5:36	6:06	6:46	7:46	8:46
Lake Worth	12:14	1:14	2:14	3:14	3:44	4:14	4:44	5:14	5:44	6:14	6:54	7:54	8:54
Boynton Beach	12:19	1:19	2:19	3:19	3:49	4:19	4:49	5:19	5:49	6:19	6:59	7:59	8:59
Delray Beach	12:27	1:27	2:27	3:27	3:57	4:27	4:57	5:27	5:57	6:27	7:07	8:07	9:07
Boca Raton	12:32	1:32	2:32	3:32	4:02	4:32	5:02	5:32	6:02	6:32	7:12	8:12	9:12
Deerfield Beach	12:39	1:39	2:39	3:39	4:09	4:39	5:09	5:39	6:09	6:39	7:19	8:19	9:19
Pompano Beach	12:43	1:43	2:43	3:43	4:13	4:43	5:13	5:43	6:13	6:43	7:23	8:23	9:23
Cypress Creek	12:49	1:49	2:49	3:49	4:19	4:49	5:19	5:49	6:19	6:49	7:29	8:29	9:29
Fort Lauderdale	12:56	1:56	2:56	3:56	4:26	4:56	5:26	5:56	6:26	6:56	7:36	8:36	9:36
Fort Lauderdale/Hollywood International Airport at Dania Beach	1:03	2:03	3:03	4:03	4:33	5:03	5:33	6:03	6:33	7:03	7:43	8:43	9:43
Sheridan Street	1:07	2:07	3:07	4:07	4:37	5:07	5:37	6:07	6:37	7:07	7:47	8:47	9:47
Hollywood	1:11	2:11	3:11	4:11	4:41	5:11	5:41	6:11	6:41	7:11	7:51	8:51	9:51
Golden Glades	1:20	2:20	3:20	4:20	4:50	5:20	5:50	6:20	6:50	7:20	8:00	9:00	10:00
Opa-locka	1:26	2:26	3:26	4:26	4:56	5:26	5:56	6:26	6:56	7:26	8:06	9:06	10:06
Metrorail Transfer	1:33	2:33	3:33	4:33	5:03	5:33	6:03	6:33	7:03	7:33	8:13	9:13	10:13
Hialeah Market	1:39	2:39	3:39	4:39	5:09	5:39	6:09	6:39	7:09	7:39	8:19	9:19	10:19
Miami Airport	1:45	2:45	3:45	4:45	5:15	5:45	6:15	6:45	7:15	7:45	8:25	9:25	10:25

Tri-Rail Service Schedule Effective 6/4/07 – Weekends

NORTHBOUND TO MANGONIA PARK STATION								
STATION	**WEEKEND/HOLIDAYS A.M.**			**WEEKEND/HOLIDAYS P.M.**				
Train Number	P660	P662	P664	P666	P668	P670	P672	P674
Miami Airport	6:00	8:00	10:00	12:00	2:00	4:00	6:00	8:30
Hialeah Market	6:03	8:03	10:03	12:03	2:03	4:03	6:03	8:33
Metrorail Transfer	6:07	8:07	10:07	12:07	2:07	4:07	6:07	8:37
Opa-locka	6:13	8:13	10:13	12:13	2:13	4:13	6:13	8:43
Golden Glades	6:18	8:18	10:18	12:18	2:18	4:18	6:18	8:48
Hollywood	6:26	8:26	10:26	12;26	2:26	4:26	6:26	8:56
Sheridan Street	6:29	8:29	10:29	12:29	2:29	4:29	6:29	8:59
Fort Lauderdale/Hollywood International Airport at Dania Beach	6:32	8:32	10:32	12:32	2:32	4:32	6:32	9:02
Fort Lauderdale	6:40	8:40	10:40	12:40	2:40	4:40	6:40	9:10
Cypress Creek	6:46	8:46	10:46	12:46	2:46	4:46	6:46	9:16
Pompano Beach	6:52	8:52	10:52	12:52	2:52	4:52	6:52	9:22
Deerfield Beach	6:57	8:57	10:57	12:57	2:57	4:57	6:57	9:27
Boca Raton	7:04	9:04	11:04	1:04	3:04	5:04	7:04	9:34
Delray Beach	7:09	9:09	11:09	1:09	3:09	5:09	7:09	9:39
Boynton Beach	7:17	9:17	11:17	1:17	3:17	5:17	7:17	9:47
Lake Worth	7:23	9:23	11:23	1:23	3:23	5:23	7:23	9:53
West Palm Beach	7:34	9:34	11:34	1:34	3:34	5:34	7:34	10:04
Mangonia Park	7:45	9:45	11:45	1:45	3:45	5:45	7:45	10:15

SOUTHBOUND TO MIAMI AIRPORT STATION								
STATION	**WEEKEND/HOLIDAYS A.M.**			**WEEKEND/HOLIDAYS P.M.**				
Train Number	P661	P663	P665	P667	P669	P671	P673	P675
Mangonia Park	6:00	8:00	10:00	12:00	2:00	4:00	6:00	8:30
West Palm Beach	6:06	8:06	10:06	12:06	2:06	4:06	6:06	8:36
Lake Worth	6:14	8:14	10:14	12:14	2:14	4:14	6:14	8:44
Boynton Beach	6;19	8:19	10:19	12:19	2:19	4:19	6:19	8:49
Delray Beach	6:27	8:27	10:27	12:27	2:27	4:27	6:27	8:57
Boca Raton	6:32	8:32	10:32	12:32	2:32	4:32	6:32	9:02
Deerfield Beach	6:39	8:39	10:39	12:39	2:39	4:39	6:39	9:09
Pompano Beach	6:43	8:43	10:43	12:43	2:43	4:43	6:43	9:13
Cypress Creek	6:49	8:49	10:49	12:49	2:49	4:49	6:49	9:19
Fort Lauderdale	6:56	8:56	10:56	12:56	2:56	4:56	6:56	9:26
Fort Lauderdale/Hollywood International Airport at Dania Beach	7:03	9:03	11:03	1:03	3:03	5:03	7:03	9:33
Sheridan Street	7:07	9:07	11:07	1:07	3:07	5:07	7:07	9:37
Hollywood	7:11	9:11	11;11	1:11	3:11	5:11	7:11	9:41
Golden Glades	7:20	9:20	11:20	1:20	3:20	5:20	7:20	9:50
Opa-locka	7:26	9:26	11:26	1:26	3:26	5:26	7:26	9:56
Metrorail Transfer	7:33	9:33	11:33	1:33	3:33	5:33	7:33	10:03
Hialeah Market	7:39	9:39	11:39	1:39	3:39	5:39	7:39	10:09
Miami Airport	7:45	9:45	11:45	1:45	3:45	5:45	7:45	10:15

AGENDA ITEM NO. I1

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: JULY 18, 2007

INFORMATION ITEM REPORT

☒ Information Item ☐ Presentation

2008 SOUTH FLORIDA TRANSIT SUMMIT

SUMMARY EXPLANATION AND BACKGROUND:

At recent PTAC meetings, the committee has discussed the concept of holding a regional Transit Summit in 2008. Mr. Larry Allen of the South Florida Regional Planning Council, who has been a strong advocate for a Transit Summit, will present this item and lead the conversation. It is hoped that consensus can be reached among PTAC members on the direction and details required to move forward with holding such an event.

EXHIBITS ATTACHED: None.

AGENDA ITEM NO. I2

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: SEPTEMBER 19, 2007

INFORMATION ITEM REPORT

☒ Information Item ☐ Presentation

2007 Rail-Volution Conference

SUMMARY EXPLANATION AND BACKGROUND:

South Florida is hosting the 2007 Rail-Volution Conference later this fall. The conference will be held October 31-November 3 in Miami Beach. Ms. Loraine Cargill of SFRTA's Planning and Capital Development staff will present this item and discuss the conference program, including the exciting array of mobile tours.

What is Rail-Volution? Rail-Volution is, first and foremost, a conference for passionate practitioners - people from all perspectives who believe strongly in the role of land use and transit as equal partners in the quest for greater livability and greater communities.

Attending Rail-Volution is like being in the midst of a living, breathing laboratory where the best new ideas from around the country are introduced, tossed around with great fervor, researched and tested thoroughly, and then shared among like-minded colleagues. Expect to attend hands-on workshops that feature case studies and how-to discussions, symposia that provide in-depth explorations of issues facing every community, and inspiring plenary sessions that showcase some of the best livability minds in the country and the world. Attend Rail-Volution and you are guaranteed to return home with a palette of new ideas and a toolbox of new strategies for making your community more livable.

Further information on Rail-Volution is available online at http://www.railvolution.com .

EXHIBITS ATTACHED: None

AGENDA ITEM NO. I3

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: SEPTEMBER 19, 2007

INFORMATION ITEM REPORT

☒ Information Item ☐ Presentation

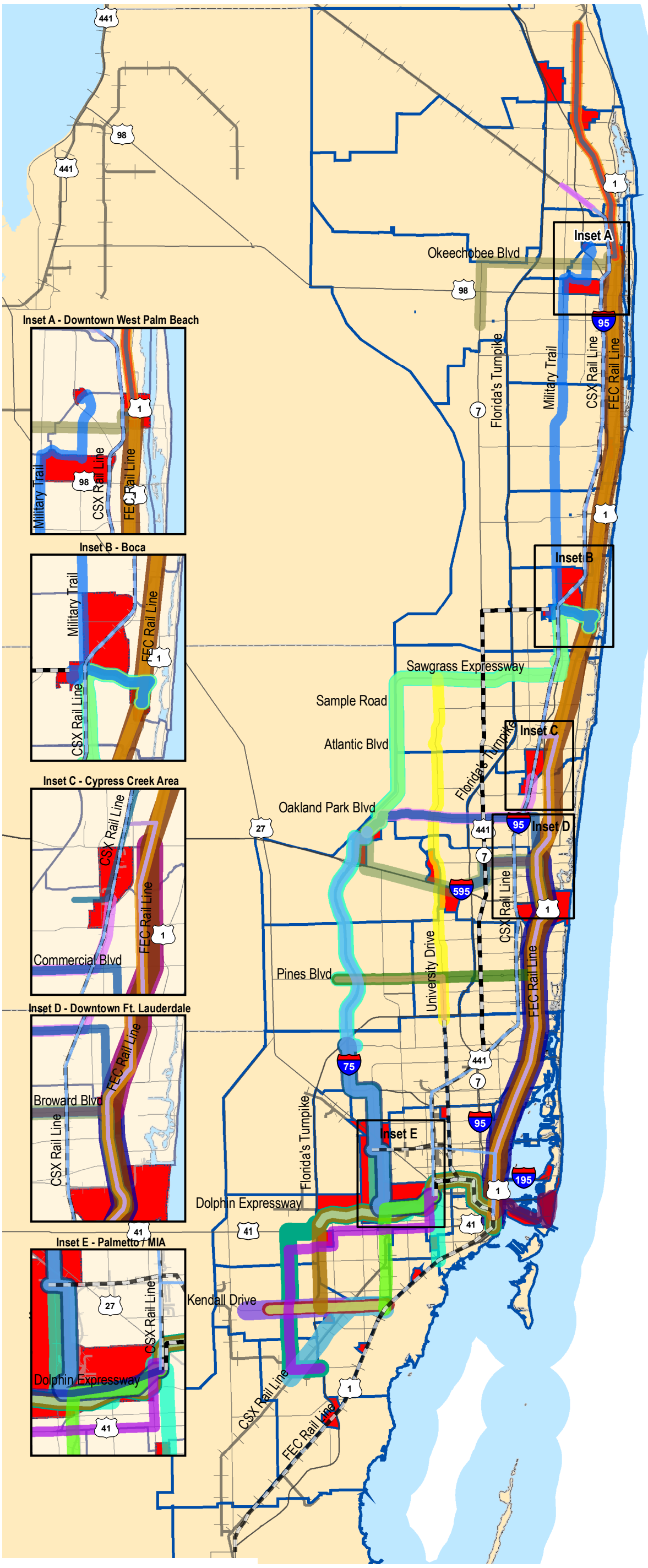
SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
STRATEGIC REGIONAL TRANSIT PLAN

SUMMARY EXPLANATION AND BACKGROUND:

At the last eight Planning Technical Advisory Committee (PTAC) meetings, presentations have been given regarding the South Florida Regional Transportation Authority (SFRTA) Strategic Regional Transit Plan. A major project milestone has been reached, as the "Screen Two" Analysis of individual projects has been completed. Maps and spreadsheets containing the Screen Two projects are attached.

The study's next major task, compiling the individual projects into networks for further evaluation, has recently begun. Preliminary versions of the "productive", "connective", and "cost effective" networks have been compiled. Large plotted maps of these networks will be shared at the September 19 PTAC meeting. It is hoped that the committee will review and evaluate the preliminary networks in a mini-workshop/roundtable format, similar to the proceedings of the April 18, 2007 PTAC meeting.

EXHIBITS ATTACHED: Screen Two Alternatives Map
Screen Two Alternative Key
Screen Two Raw Data Spreadsheet
Screen Two Ranking Data Spreadsheet
Screen Two Weighted Score Spreadsheet



Palm Beach County Alternatives

- Jupiter West Palm Beach DMU (30 I)
- Jupiter Extension - 7 Stations (30 V)
- Wellington Rapid Bus (31 K)
- Military Trail Rapid Bus (31 L)
- Tri-Rail Extension to the VA Hospital (31 U)

Three County Alternatives

- Tri-Rail Split to CBD (30 J)
- FEC Complete (30 K)
- FEC West Palm Beach to Miami (32 A)
- North-South Premium Bus - Dadeland South (31 A)
- North-South Premium Bus - Palmetto Line B (31 A)
- North-South Premium Bus - Palmetto Line A (31 A)
- North-South Premium Bus - Sawgrass to Boca (31 A)
- Douglas Road Rapid Bus (31 S)

Broward County Alternatives

- Broward East-West LRT (30 G)
- Broward East-West LRT - College to Dntn Ft. Lauderdale (30 T)
- Broward East-West LRT - SR 7 to Dntn Ft. Lauderdale (30 U)
- University Drive Rapid Bus (31 D)
- Oakland Park Rapid Bus to Dntn Ft. Lauderdale- Line A (31 O)
- Oakland Park Rapid Bus to Cypress Creek - Line B (31 O)
- Pines Rapid Bus to University - Line A (31 N)
- Pines Rapid Bus to FEC - Line B (31 N)

Two County Alternatives

- FEC Shorter Line (30 L)
- FEC Ft. Lauderdale to Miami (32 B)

Miami-Dade County Alternatives

- East-West Metrorail Extension to FIU (30 C)
- East-West Metrorail Extension to Kendall (30 D)
- 137th Avenue Rapid Bus (31 R)
- Metrorail East-West Extension w/ 137th Avenue Rapid Bus (31 T)
- Kendall Drive Extension (30 E)
- Kendall Hybrid BRT-DELRT SW 137th Ave - Line A (32 G)
- Kendall Hybrid BRT-DELRT SW 137th Ave - Line B (32 G)
- Kendall Drive Rapid Bus (31 Q)
- Miami Beach LRT (30 F)

Legend

- Baseline Premium Transit
- Interstate/Toll Road/US Road/State Road
- Activity Centers
- Superzones
- Railroad
- Lake Okeechobee
- County

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY

Prepared: September 10, 2007
Revised:

Prepared by:
Carter Burgess
Engineering, Architecture & Related Services
6363 NW 6 Way, Suite 300
Fort Lauderdale, FL 33309

N

0 2.5 5 10
Miles

SCREEN TWO ALTERNATIVES

DRAFT
9/10/07

SCREEN TWO ALTERNATIVES KEY

KEY	ALT	NAME	TECHNOLOGY	DESCRIPTION
	30C	East-West Metrorail Extension West to FIU	Metrorail	Extend Metrorail service from the MIC to FIU along the north side of SR 836/Dolphin Expressway corridor.
	30D	East-West Metrorail Extension South to Kendall	Metrorail	Extend Metrorail from the MIC to Kendall via FIU along the north side of SR 836/Dolphin Expressway and the Homestead Extension of the Florida Turnpike (HEFT) corridor.
	30E	Kendall Drive East-West Extension	Metrorail	Metrorail extension operating along SW 104th Street from Kendall in the west to the proposed terminal station for the one-mile extension to the east.
	30F	Miami Beach LRT	LRT	Connects Downtown Miami tio Miami Beach along US 41/MacArthur Causeway, Collins Avenue, and Alton Road.
	30G	Broward East-West LRT	LRT	Light rail connecting Sawgrass Mills Mall in the west to FLL Airport in the east along I-595, US 441/SR 7, and Broward Boulevard to Downtown Fort Lauderdale, and the FEC Corridor to the Airport.
	30I	Jupiter West Palm Beach DMU	DMU	Extends existing Tri-Rail commuter rail service from Downtown West Palm Beach to Indiantown Road in Jupiter.
	30J	Tri-Rail Split to CBD	Commuter Rail	Extends existing Tri-Rail alignment to the south in the vicinity of W 21st Street, going east north of 72nd Street NW, and then south along the FEC Corridor to terminate in Downtown Miami.
	30K	FEC Complete	Commuter Rail	Commuter rail in FEC Corridor from Downtown Miami to Indiantown Road in Jupiter.
	30L	FEC Shorter Line	Commuter Rail	Commuter rail in FEC Corridor from Downtown Miami to the Pompano area, where the line switches to the CSX corridor, ending at the Pompano Beach Tri-Rail Station.
	30T	Broward E-W LRT SFEC to CBD	LRT	Light rail connecting the South Florida Education Center (SFEC) to Downtown Fort Lauderdale along US 441 and Broward Boulevard.
	30V	Jupiter Extension (7 Stations)	Commuter Rail	Extension of the existing Tri-Rail commuter rail service with seven stations between Downtown West Palm Beach and Indiantown Road in Jupiter, crossing over to the FEC Corridor at Downtown West Palm Beach.
A B C D	31A	North-South Premium Bus	BRT	Formerly a 90 mile at-grade/surface rapid bus service operating largely in freeway right-of-way from MIA to Downtown Boca Raton via the MIC, this alignment will be split into four services – "A" service would connect the Dadeland South to the MIC; "B" service would connect the Palmetto area to the HEFT; "C" service would connect the Palmetto area to the Sawgrass Mills Area; and "D" service would connect the Sawgrass Mills area to I-95, Boca Town Center, and Mizner Park.
	31D	University Drive Rapid Bus	BRT	Rapid bus service operating on SR 817/University Drive from Florida's Turnpike to the Sawgrass Expressway in Broward County.
	31K	Wellington Rapid Bus	BRT	Rapid bus on Okeechobee Boulevard from Wellington Green at US 441/SR 7 and Forest Lakes Boulevard to Downtown West Palm Beach.
	31L	Military Trail Rapid Bus	BRT	Rapid bus on Military Trail, connecting Mizner Park via US1 and Glades Road with the Palm Beach Mall via Belevedere Road and Congress Avenue.
A B	31N	Pines Rapid Bus	BRT	Rapid bus service operating on Pines/Hollywood Boulevard in Broward County with A/B service from west of Sawgrass Expressway to the FEC Corridor and south of the HEFT.
A B	31O	Oakland Park Rapid Bus	BRT	Service from Sawgrass Mills, east on Oakland, and north on I-95 to Cypress Creek Station.
	31Q	Kendall Rapid Bus	BRT	Rapid bus service along Kendall Drive from the proposed Sunset KAT Metrorail Extension to Dadeland South.
	31R	137th Rapid Bus	BRT	Service along SW 137th Avenue and 8th Street from Kendall to Palmetto and the MIC.
	31S	North-South Rapid Bus with Douglas Avenue	BRT	Rapid bus service of Alternative 31A (North-South Premium Bus) extended to connect Dadeland South to the MIC along Douglas Road.
	31T	Metrorail Extension plus 137th Avenue Rapid Bus	Combined Metrorail/BRT	Combines E-W Metrorail Extension to FIU with rapid bus along 137th Avenue and the Dolphin Expressway.
	31U	Tri-Rail Extension to VA Hospital	Commuter Rail	Tri-Rail extension of one station at VA Hospital
	32A	FEC West Palm Beach to Miami	Tri-Rail	Commuter Rail operating in the existing FEC rail right-of-way, from Downtown West Palm Beach to Miami.
	32B	FEC Ft. Lauderdale to Miami	Tri-Rail	Commuter rail alternative operating in the existing FEC rail right-of-way, from Downtown Ft. Lauderdale to Downtown Miami.
A B	32G	Kendall Hybrid BRT-DELRT SW 137th Augmented	Combined DELRT/BRT	BRT from 137th Avenue to Dadeland on Kendall Drive combined with Diesel-Electric LRT from Dadeland to the Zoo on CSX right-of-way to Kendall Drive. BRT and DELRT would run in same right-of-way from the CSX to Dadeland on Kendall Drive.

DRAFT 9/10/07

Strategic Regional Transit Plan
Performance Criteria & Data
Screen Two Analysis - Raw Data

Performance Criteria	Alternative 30C	Alternative 30D	Alternative 30E	Alternative 30F	Alternative 30G	Alternative 30I	Alternative 30J	Alternative 30K	Alternative 30L	Alternative 30O	Alternative 30Q	Alternative 30T	Alternative 30U	Alternative 30V	Alternative 30W	Alternative 30X	Alternative 30Y	Alternative 30Z
	East-West Metrorail Extension West to FIU	East-West Metrorail Extension South to Kendall	Kendall Drive East-West Extension	Miami Beach LRT	Broward East-West LRT	Jupiter West Palm Beach DMU	Tri-Rail Split to CBD	FEC Complete	FEC Shorter Line	Kendall DMU #1 - Zoo	Kendall DMU #3 - Krome	Broward E-W LRT SFEC to CBD	Broward E-W LRT SR7 to CBD	Jupiter Extension (7 Stations)	Jupiter Extension (5 Stations)	Jupiter via Mangonia	Kendall DMU Combination	FEC Complete (LRT)
	Metrorail	Metrorail	Metrorail	LRT	LRT	DMU	Commuter Rail	Commuter Rail	Commuter Rail	DMU	DMU	LRT	LRT	Commuter Rail	Commuter Rail	Commuter Rail	DMU	LRT
Total Alignment Length (in miles)	8.8	14.4	7.8	8.6	20.8	17.0	9.6	83.3	40.6	14.4	14.6	8.2	3.6	13.4	13.4	15.5	21.4	82.3
Total Trip Flows	GT 30,000	GT 30,000	20,000 - 30,000	GT 30,000	20,000 - 30,000	20,000 - 30,000	GT 30,000	GT 30,000	GT 30,000	10,000 - 20,000	10,000 - 20,000	10,000 - 20,000	10,000 - 20,000	20,000 - 30,000	20,000 - 30,000	20,000 - 30,000	10,000 - 20,000	GT 30,000
Incremental Trips on New Service (Annual)	3,561,600	4,490,100	2,714,400	3,965,755	7,623,274	2,818,367	2,462,079	10,793,534	8,512,529	1,277,480	1,399,661	4,121,631	3,143,304	1,973,648	1,622,927	1,163,503	1,812,791	11,350,820
Incremental Trips / Mile on New Service (Annual)	404,727	311,813	348,000	461,134	366,504	165,786	257,809	129,574	209,668	88,714	95,867	502,638	873,140	147,287	121,114	75,065	84,710	137,920
Interjurisdictional (Crosses county lines?)	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	2
Number of Regional Activity Centers (RACs) Served via 1-Seat Ride	7	7	5	3	6	2	6	9	5	3	3	2	1	7	7	7	3	9
Intermodal Connection (Airport/Port/Tri-Rail/Metrorail)	3	3	1	2	3	2	2	3	4	2	2	1	1	2	2	2	2	3
Capital Cost per Mile (w/ Right-of-Way) (in millions)	$145.0	$144.2	$142.9	$56.7	$75.2	$40.7	$40.4	$41.1	$40.2	$46.6	$45.2	$76.7	$81.1	$41.6	$40.7	$39.6	$41.9	$41.7
Annual Cost per Trip	$29.19	$37.70	$32.30	$12.14	$17.94	$20.05	$20.82	$27.51	$16.71	$43.34	$38.93	$13.41	$8.26	$23.38	$27.92	$43.32	$41.02	$26.59
Subsidy per Trip	$2.55	$3.50	$2.02	$1.99	$1.21	$1.64	$8.21	$3.29	$1.77	$4.54	$3.97	$1.05	$0.71	$1.62	$2.15	$3.55	$4.42	$1.79
Total Capital Cost (w/ Right-of-Way) (in millions)	$1,276.2	$2,077.1	$1,114.3	$487.9	$1,563.8	$692.4	$386.0	$3,426.5	$1,634.1	$671.6	$660.1	$628.9	$292.0	$557.39	$545.74	$614.34	$895.84	$3,429.65

	Alternative 31A	Alternative 31D	Alternative 31K	Alternative 31L	Alternative 31N	Alternative 31O	Alternative 31P	Alternative 31Q	Alternative 31R	Alternative 31S	Alternative 31T	Alternative 31U	Alternative 31V	Alternative 31W	Alternative 32A	Alternative 32B	Alternative 32D	Alternative 32G
	North-South Premium Bus	University Drive Rapid Bus	Wellington Rapid Bus	Military Trail Rapid Bus	Pines Rapid Bus	Oakland Park Rapid Bus	Atlantic Rapid Bus	Kendall Rapid Bus	137th Rapid Bus	North-South Rapid Bus with Douglas Avenue	Metrorail Extension plus 137th Avenue Rapid Bus	Tri-Rail Extension to VA Hospital	Tri-Rail Extension to Zoo	DMU to Zoo plus Airport Feeders	FEC West Palm Beach to Miami	FEC Ft. Lauderdale to Miami	Sample Road Modified Rapid Bus	Kendall Hybrid BRT-DELRT SW 137th Augmented
	BRT	BRT	BRT	BRT	BRT	BRT	BRT	BRT	BRT	BRT	Combined Metrorail/BRT	Commuter Rail	Commuter Rail	Combined DMU/BRT	Commuter Rail	Commuter Rail	BRT	Combined DELRT/BRT
Total Alignment Length (in miles)	98.0	23.0	13.9	32.2	16.0	18.5	18.1	8.0	23.6	92.5	8.8	2.8	19.4	19.4	66.1	24.4	27.4	6.0
Total Trip Flows	GT 30,000	10,000 - 20,000	10,000 - 20,000	GT 30,000	10,000 - 20,000	GT 30,000	10,000 - 20,000	20,000 - 30,000	GT 30,000	GT 30,000	GT 30,000	GT 30,000	GT 30,000	10,000 - 20,000	GT 30,000	GT 30,000	10,000 - 20,000	20,000 - 30,000
Incremental Trips on New Service (Annual)	5,712,000	1,617,280	2,535,040	4,306,240	2,553,600	2,235,840	2,243,840	874,240	1,225,920	4,315,520	5,663,680	278,057	1,215,071	2,352,008	8,586,951	4,976,898	1,651,200	3,741,268
Incremental Trips / Mile on New Service (Annual)	58,286	70,317	182,377	133,734	159,600	120,856	123,969	109,280	51,946	46,654	643,600	99,306	62,633	121,238	129,908	203,971	60,263	623,545
Interjurisdictional (Crosses county lines?)	2	1	0	0	1	0	0	0	0	2	0	0	0	0	2	1	0	0
Number of Regional Activity Centers (RACs) Served via 1-Seat Ride	8	2	1	6	0	3	1	1	2	8	5	6	6	3	9	5	1	2
Intermodal Connection (Airport/Port/Tri-Rail/Metrorail)	3	1	1	2	2	1	1	1	3	3	3	2	2	3	3	3	1	1
Capital Cost per Mile (w/ Right-of-Way) (in millions)	$7.1	$22.7	$22.7	$22.7	$23.2	$23.5	$23.3	$23.4	$23.3	$7.2	$181.4	$45.0	$41.1	$65.4	$41.2	$43.1	$22.4	$86.0
Annual Cost per Trip	$11.82	$27.51	$10.66	$14.47	$13.61	$18.25	$17.40	$18.53	$38.91	$15.09	$23.26	$33.87	$55.84	$43.86	$27.49	$24.78	$31.53	$12.29
Subsidy per Trip	$0.88	$1.52	$0.26	$0.09	$1.60	$2.04	$1.94	$0.99	$2.85	$1.57	$2.21	($1.11)	$6.73	$3.19	$3.30	$2.69	$1.91	$0.95
Total Capital Cost (w/ Right-of-Way) (in millions)	$700.65	$522.79	$316.01	$729.35	$370.73	$435.15	$421.08	$186.89	$548.78	$670.38	$1,595.93	$125.92	$796.72	$1,268.22	$2,723.51	$1,050.60	$612.70	$515.87

Removed due to score

Removed due to duplication

Strategic Regional Transit Plan
Performance Criteria & Scores
Screen Two - Ranking Data

Performance Criteria	Alternative 30C East-West Metrorail Extension West to FIU Metrorail	Alternative 30D East-West Metrorail Extension South to Kendall Metrorail	Alternative 30E Kendall Drive East-West Extension Metrorail	Alternative 30F Miami Beach LRT LRT	Alternative 30G Broward East-West LRT LRT	Alternative 30I Jupiter West Palm Beach DMU DMU	Alternative 30J Tri-Rail Split to CBD Commuter Rail	Alternative 30K FEC Complete Commuter Rail	Alternative 30L FEC Shorter Line Commuter Rail	Alternative 30O Kendall DMU #1 - Zoo DMU	Alternative 30Q Kendall DMU #3 - Krome DMU	Alternative 30T Broward E-W LRT SFEC to CBD LRT	Alternative 30U Broward E-W LRT SR7 to CBD LRT	Alternative 30V Jupiter Extension (7 Stations) Commuter Rail	Alternative 30W Jupiter Extension (5 Stations) Commuter Rail	Alternative 30X Jupiter via Mangonia Commuter Rail	Alternative 30Y Kendall DMU Combination DMU	Alternative 30Z FEC Complete (LRT) LRT
Incremental Trips / Mile (Annual)	4	4	4	4	4	3	4	2	3	1	1	4	4	3	2	1	1	3
Total Trip Flows	4	4	3	4	3	3	4	4	4	2	2	2	2	3	3	3	2	4
Productive Subtotal	**8**	**8**	**7**	**8**	**7**	**6**	**8**	**6**	**7**	**3**	**3**	**6**	**6**	**6**	**5**	**4**	**3**	**7**
Interjurisdictional (Crosses county lines?)	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	2
Number of Regional Activity Centers (RACs) Served	3	3	2	2	3	1	3	4	2	2	2	1	1	3	3	3	2	4
Intermodal Connection (Airport/Port)	3	3	1	2	3	2	2	3	4	2	2	1	1	2	2	2	2	3
Connective Subtotal	**6**	**6**	**3**	**4**	**6**	**3**	**5**	**9**	**7**	**4**	**4**	**2**	**2**	**5**	**5**	**5**	**4**	**9**
Capital Cost per Mile (w/ Right-of-Way) (in millions)	1	1	1	2	1	3	3	2	3	2	2	1	1	2	3	3	2	2
Annual Cost per Trip	2	1	1	4	3	3	3	2	4	1	1	4	4	2	2	1	1	2
Subsidy per Trip	2	1	2	3	4	3	1	1	3	1	1	4	4	3	2	1	1	3
Cost-Effective Subtotal	**5**	**3**	**4**	**9**	**8**	**9**	**7**	**5**	**10**	**4**	**4**	**9**	**9**	**7**	**7**	**5**	**4**	**7**
TOTAL SCORE	**19**	**17**	**14**	**21**	**21**	**18**	**20**	**20**	**24**	**11**	**11**	**17**	**17**	**18**	**17**	**14**	**11**	**23**

Performance Criteria	Alternative 31A North-South Premium Bus BRT	Alternative 31D University Drive Rapid Bus BRT	Alternative 31K Wellington Rapid Bus BRT	Alternative 31L Military Trail Rapid Bus BRT	Alternative 31N Pines Rapid Bus BRT	Alternative 31O Oakland Park Rapid Bus BRT	Alternative 31P Atlantic Rapid Bus BRT	Alternative 31Q Kendall Rapid Bus BRT	Alternative 31R 137th Rapid Bus BRT	Alternative 31S North-South Rapid Bus with Douglas Avenue BRT	Alternative 31T Metrorail Extension plus 137th Avenue Rapid Bus Combined Metrorail/BRT	Alternative 31U Tri-Rail Extension to VA Hospital Commuter Rail	Alternative 31V Tri-Rail Extension to Zoo Commuter Rail	Alternative 31W DMU to Zoo plus Airport Feeders Combined DMU/BRT	Alternative 32A FEC West Palm Beach to Miami Commuter Rail	Alternative 32B FEC Ft. Lauderdale to Miami Commuter Rail	Alternative 32D Sample Road Modified Rapid Bus BRT	Alternative 32G Kendall Hybrid BRT+ DELRT SW 137th Augmented Combined DELRT/BRT
Incremental Trips / Mile (Annual)	1	1	3	2	3	2	2	2	1	1	4	2	1	2	2	3	1	4
Total Trip Flows	4	2	2	4	2	4	2	3	4	4	4	4	4	4	4	4	2	3
Productive Subtotal	**5**	**3**	**5**	**6**	**5**	**6**	**4**	**5**	**5**	**5**	**8**	**6**	**5**	**4**	**6**	**7**	**3**	**7**
Interjurisdictional (Crosses county lines?)	2	1	0	0	1	0	0	0	0	2	0	0	0	0	2	1	0	0
Number of Regional Activity Centers (RACs) Served	4	1	1	3	1	2	1	1	1	4	2	3	3	2	4	2	1	1
Intermodal Connection (Airport/Port)	3	1	1	2	2	1	1	1	3	3	3	2	2	3	3	3	1	1
Connective Subtotal	**9**	**3**	**2**	**5**	**4**	**3**	**2**	**2**	**4**	**9**	**5**	**5**	**5**	**5**	**9**	**6**	**2**	**2**
Capital Cost per Mile (w/ Right-of-Way) (in millions)	4	4	4	4	4	3	4	3	4	4	1	2	3	1	2	2	4	1
Annual Cost per Trip	4	2	4	4	4	3	3	3	1	4	3	1	1	1	2	2	2	4
Subsidy per Trip	4	3	4	4	3	2	3	4	2	3	2	4	1	2	1	2	3	4
Cost-Effective Subtotal	**12**	**9**	**12**	**12**	**11**	**8**	**10**	**10**	**7**	**11**	**6**	**7**	**5**	**4**	**5**	**6**	**9**	**9**
TOTAL SCORE	**26**	**15**	**19**	**23**	**20**	**17**	**16**	**17**	**16**	**25**	**19**	**18**	**15**	**13**	**20**	**19**	**14**	**18**

Removed due to score

Removed due to duplication

Strategic Regional Transit Plan
Weighted Scores
Screen Two - Weighted Scores

Performance Criteria	Alternative 30C East-West Metrorail Extension West to FIU Metrorail	Alternative 30D East-West Metrorail Extension South to Kendall Metrorail	Alternative 30E Kendall Drive East-West Extension Metrorail	Alternative 30F Miami Beach LRT LRT	Alternative 30G Broward East-West LRT LRT	Alternative 30I Jupiter West Palm Beach DMU DMU	Alternative 30J Tri-Rail Split to CBD Commuter Rail	Alternative 30K FEC Complete Commuter Rail	Alternative 30L FEC Shorter Line Commuter Rail	Alternative 30O Kendall DMU #1 - Zoo DMU	Alternative 30Q Kendall DMU #3 - Krome DMU	Alternative 30T Broward E-W LRT SFEC to CBD LRT	Alternative 30U Broward E-W LRT SR7 to CBD LRT	Alternative 30V Jupiter Extension (7 Stations) Commuter Rail	Alternative 30W Jupiter Extension (5 Stations) Commuter Rail	Alternative 30X Jupiter via Mangonia Commuter Rail	Alternative 30Y Kendall DMU Combination DMU	Alternative 30Z FEC Complete (LRT) LRT	Alternative 31A North-South Premium Bus BRT	Alternative 31D University Drive Rapid Bus BRT	Alternative 31K Wellington Rapid Bus BRT	Alternative 31L Military Trail Rapid Bus BRT	Alternative 31N Pines Rapid Bus BRT	Alternative 31O Oakland Park Rapid Bus BRT	Alternative 31P Atlantic Rapid Bus BRT	Alternative 31Q Kendall Rapid Bus BRT	Alternative 31R 137th Rapid Bus BRT	Alternative 31S North-South Rapid Bus with Douglas Avenue BRT	Alternative 31T Metrorail Extension plus 137th Avenue Rapid Bus Combined Metrorail/BRT	Alternative 31U Tri-Rail Extension to VA Hospital Commuter Rail	Alternative 31V Tri-Rail Extension to Zoo Commuter Rail	Alternative 31W DMU to Zoo plus Airport Feeders Combined DMU/BRT	Alternative 32A FEC West Palm Beach to Miami Commuter Rail	Alternative 32B FEC Ft. Lauderdale to Miami Commuter Rail	Alternative 32D Sample Road Modified Rapid Bus BRT	Alternative 32G Kendall Hybrid BRT-DELRT SW 137th Augmented Combined DELRT/BRT
Productive Subtotal	8	8	7	8	7	6	8	6	7	3	3	6	6	6	5	4	3	7	5	3	5	6	5	6	4	5	5	5	8	6	5	4	6	7	3	7
Connective Subtotal	6	6	3	4	6	3	5	9	7	4	4	2	2	5	5	5	4	9	9	3	2	5	4	3	2	2	4	9	5	5	5	5	9	6	2	2
Cost-Effective Subtotal	5	3	4	9	8	9	7	5	10	4	4	9	9	7	7	5	4	7	12	9	12	12	11	8	10	10	7	11	6	7	5	4	5	6	9	9
TOTAL SCORE	**19**	**17**	**14**	**21**	**21**	**18**	**20**	**20**	**24**	**11**	**11**	**17**	**17**	**18**	**17**	**14**	**11**	**23**	**26**	**15**	**19**	**23**	**20**	**17**	**16**	**17**	**16**	**25**	**19**	**18**	**15**	**13**	**20**	**19**	**14**	**18**
Prod Weight Score	7	6.6	5.6	7.4	7	6	7.2	6.4	7.6	3.4	3.4	5.8	5.8	6	5.4	4.4	3.4	7.4	7.2	4.2	5.8	7	6	5.8	4.8	5.4	5.2	7	7	6	5	4.2	6.4	6.6	4	6.4
Conn Weight Score	6.2	5.8	4	5.8	6.6	4.8	6	7.6	7.6	3.8	3.8	4.2	4.2	5.6	5.4	4.8	3.8	8.2	8.8	4.2	4.6	6.6	5.6	4.6	4	4.2	4.8	8.6	5.8	5.6	5	4.6	7.6	6.2	3.6	4.4
Cost Weight Score	5.8	4.6	4.4	7.8	7.4	7.2	6.8	6	8.8	3.8	3.8	7	7	6.4	6.2	4.8	3.8	7.4	10	6.6	8.6	9.4	8.4	6.6	7.2	7.4	6	9.4	6.2	6.4	5	4.2	6	6.2	6.4	7.2
Prod Weight	MID	MID	MID	TOP	MID	MID	TOP	MID	TOP	BOT	BOT	MID	MID	MID	MID	BOT	BOT	TOP	TOP	BOT	MID	MID	MID	MID	BOT	MID	MID	MID	MID	MID	BOT	BOT	MID	MID	BOT	MID
Conn Weight	MID	MID	BOT	MID	MID	MID	MID	TOP	TOP	BOT	BOT	MID	MID	MID	MID	MID	BOT	TOP	TOP	MID	MID	MID	MID	MID	BOT	MID	MID	TOP	MID	MID	MID	MID	TOP	MID	BOT	MID
Cost Weight	BOT	BOT	BOT	TOP	MID	MID	MID	MID	TOP	BOT	BOT	MID	MID	MID	MID	BOT	BOT	MID	TOP	MID	TOP	TOP	TOP	MID	MID	MID	MID	TOP	MID	MID	BOT	BOT	MID	MID	MID	MID

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